COIN-OPS, CARTS AND COMPUTER SOFTWARE REVIEWS

VIDEO GAMES™

JANUARY 1984
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No. 16

THE COMMODORE 64 A Computer You Can Grow With

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Tuning Into TV's Whiz Kids

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Pitchman's Dr. Slye

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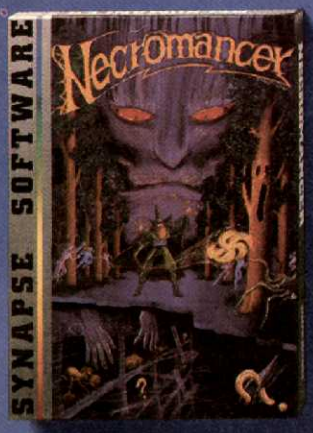

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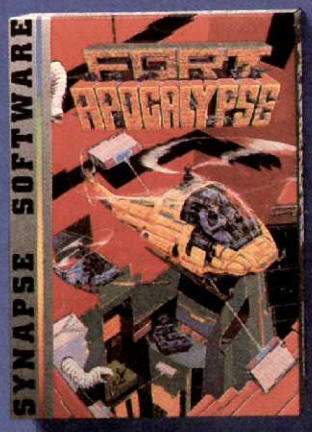

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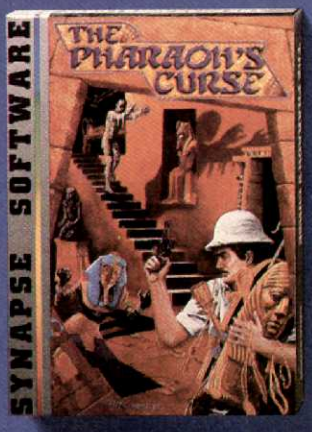

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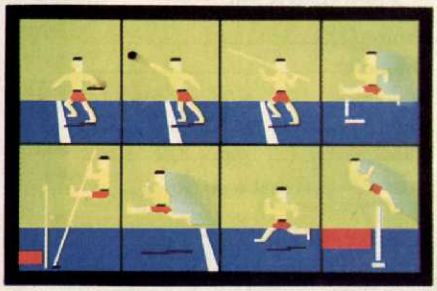

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1. Which game system(s) do you own? (1)
__Atari® 2600™ (1) __Intellivision® (3)
__Atari® 5200™ (2) __ColecoVision™ (4)

2. How old are you? (2)
__ 6-11 (1) __18-24 (3)
__12-17 (2) __25 or older (4)

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HYPERSPACE

With all the fanfare due to the supposed messiah of coin-op as well as video games, laserdisc technology seems the best bet to lead our industry out of the wilderness. Already we have seen such efforts as Astron Belt, Dragon's Lair and the latest additions to the line-up—M.A.C.H. 3, Laser Grand Prix, Bega's Battle and even the follow up to DL called Space Ace (December Video Games). However, the ranks of disc games continues to swell in size with the inclusion of Pitchman, this month's cover story. Due for release the beginning of 1984, this creation from a new firm, Laser Disc Computer Systems, will be coming your way under the Stern name via a licensing agreement between the two companies.

Pitchman is interesting for a couple of reasons, not the least of which is the fact that it incorporates a live-action character called Dr. Slye who has more than a few tricks up his sleeve. As for Stern Electronics, this coin-op manufacturer has already hit with another licensed disc adventure, Cliff Hanger from TMS Electronics.

Cliff Hanger brings more animated action footage to the arcades, with an episodic storyline and more responsive player controls than we've seen so far with these new games. As for Mylstar's flight of fancy, M.A.C.H. 3, much has been done to improve upon the original prototype which was making the rounds late summer. Improved sound effects, musical background and speech are only a few of the cosmetic changes you'll notice when you encounter it in your local game room.

It's obvious that the variations on a theme, whether it be disc or conventional video, are still limitless as arcade games race ahead of the pack. But what about the past? How did it all start and who really is responsible for the birth of video games? Well, turn to page 40 and read the untold history of video games and encounter some names you might not have heard of before.

The computer revolution, although slowed by late release dates of models introduced back in the summer, is still going strong. This month's "Hard Sell" brings you a review and analysis of the hottest system around, the Commodore 64 (page 32). Also our computer coverage brings you more info beginning on page 72 with a wealth of reviews of the latest titles.

But there's still more to discover. A new television series, "Whiz Kids" is making some news with a modern day story of kids and computers. Get an inside look at the show's producer Phil DeGuere on page 21. And, if you've been wondering about new directions in game design, you may be surprised to find that artists are leading the way with imaginative graphic and sound effects for home games that are catapulting them to new heights (page 27).

This month's *Video Games* also pays tribute to a very special member of the games' community who achieved fame and fortune for his innovations which propelled games into new frontiers. Harry Williams had a profound impact on the arcade game industry which will never be forgotten.

Games reviews, strategies, overviews and insights into the world of video, it's all ahead in this issue of Video Games. So enjoy!

Roger C Sharpe

Double Speak

A Matter Of Opinion

I don't think that Esme Codell's letter (November '83) attacking "Dragon's Lair" was quite fair. I won't deny the game is violent, however labelling it disgusting is indeed a matter of opinion. As for being "overly-gory" the only blood you see in the whole game is when Dirk chops down a green tentacle, and very briefly when he slices open the Giddy Goons. True, if a gamer is inexperienced or careless, Dirk may get a spear through his heart or a dozen knives in his back. But, mercifully, you never see him bleed. In *my* opinion, there are a lot of us who have grown so accustomed to the bland, Hanna/Barbera-type cartoons presented on Saturday mornings that when some really exciting and realistic animation comes along, we tend to cringe. But I have seen gamers guide Dirk all the way to the dragon's lair and slay the dragon without wasting a single life! To me, this makes *DL* a very entertaining and satisfying game. Quite frankly, if you can't take the "creepy" situations, then you had better go back to the more passive games like Ms. Pac-Man or Pole Position.

Tracy Horton
LaHabra, CA.

An Enduring Contest

In your November '83 issue, I read that the longest anyone has ever endured on a video game is 74 hours. I know that it is possible to reach a skill level where physical fatigue and boredom are the determining factors of how long a game will last. I have been able to do this on three different machines to date, and would like to go for the endurance record on the Star Trek game. The longest I've ever played the game was nearly 5½ hours. It would be challenging to play in a video game marathon where players can play for a worthy cause by getting people to sponsor them. Thanks for listening.

Darren Harris
Staten Island, New York

Keep On Truckin'

I found a secret message in Imagic's Truckin'. To find it, all you do is drive north on 101 until you reach San Jose, California (SJ). Please note: SJ is not on the map nor is Santa Cruz, California (SZ). When you reach SJ, turn left off of 101. You'll then be driving down Highway 9 heading west (this highway is not on the map either). After this you'll drive to an imaginary city (RL), which are the designer's initials. You will also see an Imagic sign at the end of the road. In actuality, there is a Highway 9, between San Jose and Santa Cruz which is right next to Imagic's headquarters located in Los Gatos, California. Nice job Richard Levine.!

Paul Nurminen
El Segundo, CA.

Games Review

I'm starting a video gamers club and to join you must have a subscription to any video game-oriented magazine. Each month you'll receive a newsletter reviewing what's in each video game magazine in addition to reviews of games, etc. The first twelve issues are free. For your subscription write to: Christian Turner, 423 Fiarsgate Blvd., Irmo, South Carolina 29063.

The Forgotten VCS?

I'm getting tired of reading Double Speak each month with the continuing debate over which system is better: The Atari 5200 or ColecoVision. I think it's pretty sad when gamers start bickering over which system is the best. Each has its strong points, so shouldn't the consumer decide in the end. I recently purchased an Atari 2600 and despite all its limitations, I love it! I just hope no one starts cutting *me* down for endorsing the VCS.

Joe L. Wehmeyer
St. Louis, MO.

Low-Res 'Roo

This letter is in response to Richard Squibbs' letter (October '83). I am an Atari 5200 owner and think he was being picky when he stated: "Look at the 5200's Kangaroo and you'll notice that the floor underwhich the baby 'roo is standing looks like low-resolution Atari 2600 material!" What he failed to mention was that the roof looks just like the one in the arcade and that 2600 Kangaroo does not even *have* a roof for the baby 'roo to stand under! Also, 5200's Kangaroo has all four screens—as in the coin-up—while Coleco left out one of Donkey Kong's screens in their adaptation for the ColecoVision. Finally, when one considers the fact that Broderbund, CBS, Imagic, Parker Brothers and Sega all plan to produce 5200 carts, it is obvious which is the better video game system.

Kevin R. Byers
Dayton, Ohio

More Baby Pac-Man

I like your magazine because it reports alot about computers and games. Can you please put something about Baby Pac-Man in your next issue please.

Karen Kuncze
San Francisco, CA.

Well, Karen we already gave you some playing tips for Baby Pac-Man back in our August'83 issue ("Beating the Coin-Op") and we're waiting word on Bally's

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Double Speak

(continued from page 6)

pin/vid follow-up to be released soon. So stay tuned.—Ed.

Locating The SV-328

Could you please provide me with Spectravideo's address, which was featured in the September '83 issue of *VG*. Spectravideo produces the SV-328 personal computer which I would like more information. Thanks you for your help.

Craig C. Goldman
Brookfield, Illinois

You can contact Spectravision at 39 West 37th Street, New York, New York 10018. Their phone number is (212)869-7911.

Sports Time

Now that ColecoVision sports cartridges are going to be released, why don't you feature another Video Game Sports Illustrated article like the one in your June '83 issue? This time around compare all other sports to Coleco's sports.

Michael Giusto
Englewood Cliffs, NJ

Thanks for the suggestion. We're planning to do just that in the spring when more releases are introduced.—Ed.

Getting Recognition

In your October '83 issue you mentioned that for $2.98 (50¢ handling) you can obtain "The Video Recognition Pack." The example shown was Rank of Ensign. My question is this: Are there any other ranks available and also are there other "Recognition Packs" available other than for space games?

Andrew Rezvani
Wyncote, PA.

Well, Andrew we contacted Mike Kropp, President of Kropp Enterprises who informed us that at the moment his company is only making available the Rank of Ensign for the Starfighter Command Recognition Pack. In the future, he said he hoped to be marketing other types of games (i.e.: racing, etc.). For more information you can write Kropp Enterprises, Inc., P.O. Box 656, Clermont, Florida 32711.—Ed.

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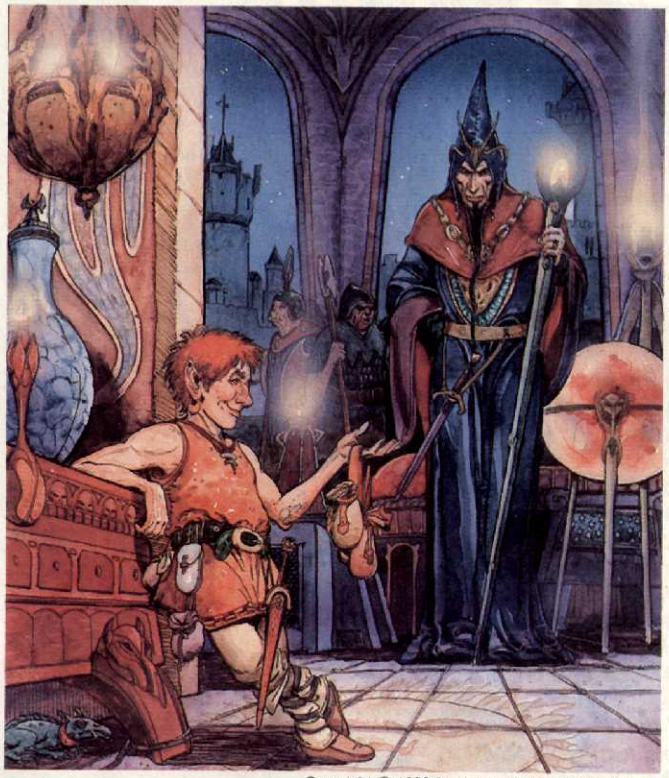
BLIPS

Wizardry Wonders: A Novel Idea

Not every video game involves spaceships invading the earth or cute creatures hopping and gobbling. Sometimes the hero of a game might be a troll in a medieval setting with magic, mountains, prophecies and amulets of power.

Once again, Atari has teamed up with sister company DC Comics to present *Warlords,* based on the long-time popular Atari 2600 game, and available this month as a 64-page graphic novel. The $5.95 volume represents the last of the DC-Atari collaborations for the time being excepting the monthly *Atari Force* comic book (see October *Video Games).*



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Warlords tells the tale of a troll known as Just Plain Duane, a con artist supreme, who unwittingly gets involved in a power struggle that will forever change the world. Duane and a friend present the kidnapped inventor Warlord to the Wizard Warlord, Marcus. The Wizard wants his brother, the Inventor, to further his scheme to rule the world under one crown, not four. However, it appears that Duane kidnapped a robot duplicate which enrages Marcus.

Duane uses his natural gift of gab to talk his way out of the predicament but also grabs parts of an ancient Troll charm that was quartered after the Warlords' father passed away. Duane's taking possession of the charm signals the coming of a long-held prophecy that a savior would prevent the world from being torn asunder by civil war. It's a job Duane, a plunderer by nature, does not want in the slightest.

According to Special Projects Editor Dave Manak, it was a pleasure to work on from beginning to end, partially owing to the uniqueness of the story. "About the only connection to the game is the title and that there are four Warlords," he explains. "We came up with the Troll and then chose Steve Skeates to be the writer on it. He worked very closely with Joe Orlando, the Editorial Director and myself to come up with the storyline. We also got in touch with Dave Wenzel who turned out to be the perfect artist for the project."

Although Skeates is a veteran comics writer who has been involved with everything from humor to superheroes, Wenzel is an accomplished fantasy artist, perhaps best known for the book *Kingdom of the Dwarfs.*

"Steve was working in here with us and Dave was in a few times to talk and gave a great deal of input into the finished story. It was a kind of massive team effort," Manak explains. Wenzel took full advantage of DC's printing process to do more complex artwork involving painting his pages after drawing them, then adding another level of depth to the art. "It's stunning," Manak adds. The process worked to a great degree in their first graphic novel, *Star Raiders* (August *VG*).

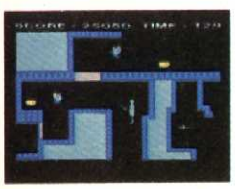
"I think it's a good, basic idea," Manak observes. "I think it's very interesting to see how he gets in and out of these things. Just about everyone is looking to get their hands around Duane's throat. They're all people Duane has connived and they want to get him. Sometimes he's the antagonist, sometimes the protagonist, and *always* the catalyst. He bounces around looking for worldly gain and that's really how the whole story started."

The project began in November, 1982 and was then interrupted while Atari was re-evaluating its commitment to the comic projects. When they finally opted to get out of comics, DC took over the project entirely, starting again in March, 1982 and the book went to press in late September.

Manak expresses great enthusiasm over the project and working with the two creators. The world of Duane and the *Warlords* will be rich and varied, hopefully allowing readers to find a true change of pace from the usual slam-bang video action.

—Richard Goodwin

WELCOME TO APSHAI. YOU'RE JUST IN TIME FOR LUNCH.



Boy, have you taken a wrong turn. One moment you're gathering treasure and the next you're being eyed like a side of beef.

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They'll be eaten.

One player; Temple of Apshai, disk/cassette; Gateway to Apshai, cartridge, joystick control.

EPYX COMPUTER SOFTWARE

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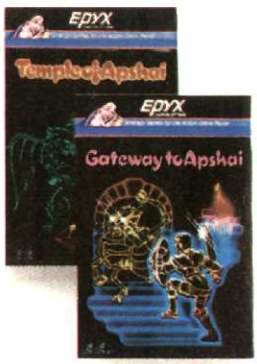


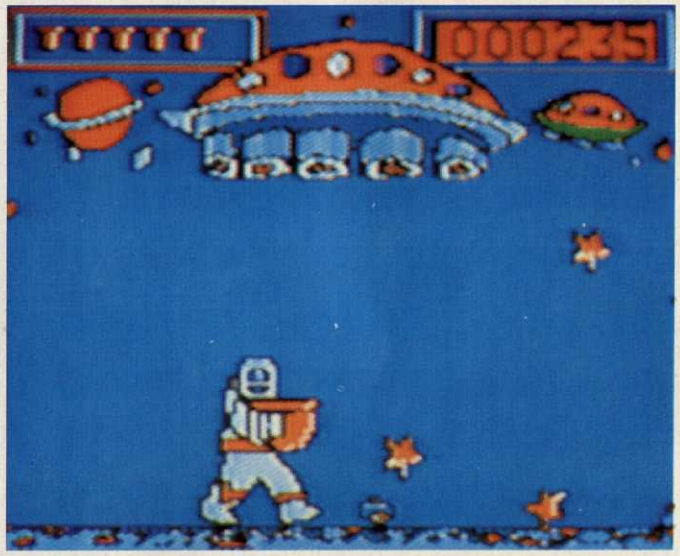
*Game Manufacturers Association, 1981

Learning Can Be Fun

Xerox Education Publications, is not only the nation's oldest publisher of classroom periodicals, the leading marketer of hardcover and paperback children's books, but now is also a producer of fun and educational software programs for children and their families. Weekly Reader Family Software (a division of Xerox Education Publications) has introduced seven new software programs for the Apple personal computer which combines learning with fun. Sophisticated graphics and colorful print material and packaging make them extremely attractive to children. Out of the seven new games, the five developed by Optimum Resources, Inc, are Stickybear Basketbounce, Stickbear Opposites, Stickybear Shapes, Fat City, and Chivalry.

Stickybear Basketbounce is a multi-level game for the entire family. In it points are won by catching colorful bouncing bricks, doughnuts or stars before running out of baskets (ages 3 to 99). Stickybear Opposites teaches opposites such as up/down, full/empty, front/behind and much for the three-to-six year-old range.

The remaining two programs, which Technical Education Research Centers of Cambridge, MA developed are Exploring Tables and Graphs, grades 3 to 4 and Exploring Tables and Graphs, grades 5 to 6. These are both for home and classroom use. Exploring Tables and Graphs is an introduction to how graphs work and are used. For grades 5 to 6, children concentrate more on experimenting with tables and picture, bar, line and area graphs. Dr. Nancy White Kelly, Independent Software Evaluator and Professional Educator feels "This is the finest preschool graphics is software I've ever seen! The kids never wanted to stop." Not only do children enjoy these games, but also their parents and grandparents as well.



—Melinda Glass

A Collective Bargain

Finally, the video game player has an organization that he/she can turn to so that views and needs can be collectively made known to society. This organization is VIDION—The International Association of the Video Game Players.

The reason for its existence is to "act as a common voice for video game playing consumers to insure that their attitudes, opinions, and concerns are adequately and appropriately represented and expressed to those interests, both public and private, political and non-political, who have an impact on the association's membership and the industry of which that membership is an extension."

VIDION may only be three months old, but it already has over 3,000 members. Any video game and computer enthusiast can become a member nationwide. To join there is a small yearly fee of $10 for individuals and $15 for families. Members can participate in regional, national, and international competitions (for cash and merchandise prizes), publication and product discounts, a newsletter, a game exchange swap list and even a official VIDION decal. To receive more information on VIDION write: VIDION—The International Association of Video Game Players, 1440 N. Street, N.W. Suite 601, Washington, D.C. 20005, or call (202) 328-9346.

—MG

Scholarly Feats

What are the effects that computers have had on the quality of everyday life and education? Does the computer influence the cognitive, affective and motor development of children? At the present time, these questions and many others remain unanswered. However, the possibility of these questions being answered in the near future has been brought closer due to a $100,000 research grant from Scholastic, Inc. to New York University's School of Education, Health, Nursing and Arts Professions. This grant is the first to be offered to a major university to research and study the rapid changes of the microcomuter on everyday family and educational activities.,

Through Scholastics funding of this two year, longitudinal study, they are showing their belief that computers will become a major factor in family life. Richard Robinson, President of Scholastic Inc. feels, "It is essential, however, that all of us come to know more about the effects the computer will have."

—MG

Computer Bytes

Atari, in conjuction with General Foods, is sponsoring a promotion called "Catch on to Computers." In exchange for box tops from Post cereal boxes, customers can get Atari hardware, software and peripherals.

—Mary Claire Blakeman

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If you do pull into the pits, though, you lose precious seconds. So it's up to you to make sure the pit crew is quick with those tires. And careful with that gas. Otherwise, poof! you're out of the race.

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So what'll it be, Mario? Think your tires will hold up for another lap? Or should you play it safe and go get some new ones?

Think it over. Because Pitstop™ is the one and only road race game where winning is more than just driving. It's the pits.

Goggles not included.

One or two players; 6 racecourses, joystick control.

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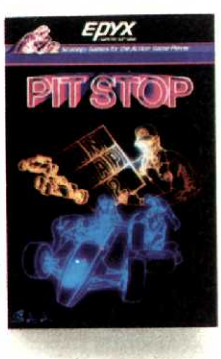


Chuck E. Cheese Builds a Better Mousetrap

Boy grabs a beer and plays a game of pool. Girl munches on a salad and racks up points on Q*bert. Boy meets girl.

That's the variation on the oldest game in town that Pizza Time Threater now hopes to cash in on. The folks who brought you Chuck E. Cheese wanted to bring single people and other young adults together under one classy roof. To do that they shut down some unprofitable Chuck E. Cheese units and turned them into a new kind of game emporium called Zapp's.

Zapp's is a combination bar/restaurant/arcade/dance hall and high tech wonderland. It's got Dragon's Lair, Pole Position, and Pac-Man and it's also got pool tables, backgammon and risque videotapes in the men's *and* women's restrooms.

Not surprisingly, the idea for Zapp's came from that master packager Nolan Bushnell, the man who invented Pong and started Atari.

Pizza Time Theater spokesperson John Porter says that the Zapp's concept was partially prompted by Bushnell's experience with his first video game which started out in a wine cask in a Silicon Valley tavern. "There have been arcades and there have been bars, but the two haven't been put together well," Porter says. "Zapp's covers a lot of bases. We see it as another entertainment niche."

For now, Zapp's is limited to the test market stage. The original unit in Cupertino opened during the summer, while a second one began business in Tampa during October. A third Zapp's is slated to open in Dallas this winter. If the concept goes over, it would lead to a full-fledged chain around the country.

Each location has its own modifications on the basic Zapp's theme. For instance, the Dallas site will have larger dance floors while Tampa features a separate dining area and nine red-curtained private dining booths instead of three as in the Cupertino unit.

"We're working on a modular system eventually," says Jim Musgrove, director of operations for Zapp's, "but we want to do various things in each store to see how broad-based the appeal is and to see what adjustments are needed. We want to analyze the concept quickly and with the explosive growth of Pizza Time Theater we had not had that analytical capability. So now we want to look at it carefully."

Check E. Cheese, mascot of Pizza Time Theatre, with his Androbot "cousin" Topo.

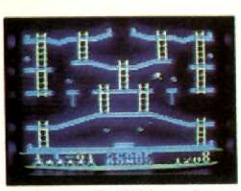
Musgrove adds that the company is working with Kerry Marketing of San Jose and Stanford University as well as the University of South Florida in studying the idea.

What the marketing experts know so far is that Zapp's will do best in high population areas with large numbers of single people or single parents in the 21 to 45-year-old age bracket. Porter says that the Cupertino area was chosen as the site of the first Zapp's since it fit the demographics so well. Besides, the company already had two other Chuck E. Cheese locations in the vicinity. "This is something we've wanted to do for a while, and, in terms of locations, the opportunity came along in Cupertino," he says. "There are a lot of single people in that area and that's the big part of the market for Zapp's"

But Zapp's is designed to be more than just another singles bar. "Zapp's has a casual, relaxed atmosphere," says Jim Musgrove. "it provides an excuse to have fun and meet people." Denis Rosner, manager of the Cupertino Zapp's backs up that contention: "It's not an intimidating scene," he says. "You can come in here with any number of predispositions and can find a way to amuse yourself."

Patrons of the Cupertino Zapp's seem to agree—and they point to the video games and other amusements as a strong feature which takes the pressure off meeting new people. Susan, a 23-year-old secretary says, "I like it, you can come in and play a few games and get 'Zapped'.

JUMPMAN'S A GREAT GAME. BUT YOU'VE GOT TO WATCH YOUR STEP.



Meet the Alienators. A fiendish bunch who've planted bombs throughout your Jupiter Command Headquarters.

Your job? Use your lightning speed to scale ladders, scurry across girders, climb ropes and race through 30 levels to defuse the bombs before they go off.

That's the kind of hot, non-stop action we've packed into the award-winning,* best-selling Jumpman,™ and into Jumpman Jr.,™ our new cartridge version with 12 all-new, different and exciting screens.

Both games force you to make tough choices. Should you avoid that Alienator, climb to the top and try to work your way down, or try to hurdle him and defuse the bombs closest to you before they go off?

If you move fast you'll earn extra lives. But if you're not careful, it's a long way down.

So jump to it. And find out why Jumpman and Jumpman Jr. are on a level all their own.

One to four players; 8 speeds; joystick control. Jumpman has 30 screens. Jumpman Jr. has 12 screens.

*1983 C.E.S. award winner.

EPYX
COMPUTER SOFTWARE

STRATEGY GAMES FOR THE ACTION-GAME PLAYER.

You're not confined to just doing one thing."

Mike, a technician in his 30s, says Zapp's atmosphere is conducive to friendly conversations, even among men. "The guys are not so competitive as they are in other places where they're all after the women," he says. "You can talk to each other and play pool or shuffleboard. It's not so much of a 'meat market' as other places."

Another feature the male patrons may enjoy is the huge television screens which are a focal point of one area of Zapp's. During sporting events, such as Monday Night Football or the World Series, the management offers drink specials for various athletic feats such as a touchdown or home run. "When Carl Yastrzemski hit a grand slam homer in the All Star game we gave a round of beer on the house," says manager Rosner. "And I don't think anyplace in town has a better crowd for Monday Night Football than we do."

Rosner is quick to emphasize, however, that the video screens are not just filled with events men like. "We try to have something for everyone and if there's a tape or a women's sporting event or something like that we put that on too," he says. Sometimes a football game will appear on the main screen while MTV is shown on others which dot the location. "There's almost no vantage point in the place where you can't see a screen." Rosner adds.

Just how the Zapp's concept will affect other arcades and the marketing of video games is not yet known. One thing that may emerge, however, is a new character in the video game world: Captain Zapp. He is a dark-haired mustachioed figure who is supposed to be the greatest game player in the world.

If Captain Zapp and his new funhouse win the hearts of Americans, he may prove that video games are not just child's play anymore.

—MCB

A Duplicating Design

First there were tape recorders, then VCRs emerged, now finally, there is the Video Game Recorder (VGR) and Copy Cart. Nine months in the making, the new technological break through is from Vidco International (1220 Broadway, New York, NY 10001). These revolutionary new gadgets make it possible to copy video games onto the COPY CART (the blank Vidco video game cartridge). Program these blank cartridges not only once, but as many times as there are games on the market.

In two seconds, this hand held device can accomplish this amazing programming task! What makes the VGR even better is its simplicity. Just insert a Vidco game cartridge into the 'Game Cart' slot and a 'Copy Cart' into the slot at the opposite end, press the rectangular button (which activates the L.E.D. light) and in a matter of moments, when the L.E.D. light goes out, release the button and the cartridge has been copied and is ready for play. Bored with the copied game? No problem, just copy another game over the previous one using the same procedures (follow instruction booklet). The same blank cartridge can be used over and over, just like a blank cassette tape.

The suggested retail price of the VGR is $49.95. This may seem steep, but the VGR is not all that's included. Besides the Video Game Recorder there is a blank game cartridge (Copy Cart) and a Vidco game cartridge. Additional blank cartridges are approximately $15.95 each, and Vidco video games cost $9.95. The Vidco games and Copy Cart games are designed to be used with the Sears Video Arcade and the Atari 2600 system and are available now at stores nationwide.

—MG

Color Me More Aware

Are you one of those baseball mavens who knows the batting average and RBI's of every player of your favorite team, but when it comes to school work, your batting under .200? Well research has shown that information can be more easily absorbed if it's presented in both a verbal and visual form. This learning process is increased if the hands are used to draw figures, thereby creating self-involvement.

The self-involvement concept is what the *New Technology Coloring Book* by Bantam Books is all about.

It's designed to help you understand the latest technologies which have become a part of everyday life by involving you in the learning and understanding process. The 35 topics that have been selected for this book are ordered so that an awareness of the connections between the technologies can be seen. Each topic has a picture which can be colored (and it is recommended) along with an explanation of the topic. However, before the picture is colored the explanation should be read so that as the coloring is done the words take on a greater meaning. Instead of just being words on a page, they become a visual concept; that's more alive. For example, one of the topics covered is CatScans. The description of the picture talks about yellow patches which represent periosteum and orange areas which represent muscles. As these areas are colored in, and you see where these words are located, they take on a new meaning. They are no longer words on a page, which is what learning should be about.

—MG

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World Champs Go For Gold

Munich, Germany, which was the home of the 1936 and 1972 Olympics, was also the site recently for a competition that will send Centipede champions to the 1984 Los Angeles Olympics. On September 14, 1983, regional Centipede winners competed for the title of World Centipede Champion in *Atari's Centipede Video Game Championship*. The two categories in the competition were: The 18 and under and the 18 and over divisions. Winners in the 18 and under were: 1) Stewart Murray, 14, of Aberden, Scotland with a high score of 323,512 points; 2) Shui-Fan Or, 14, or Hong Kong with 318, 881 points; and 3) Michele Minet, 17, or Vise, Belgium with a score of 311,516 points.

In the 18 and over winners circle were: 1) Andrew Brezezinski, 19, from Greenford, Middlesex England, racking up 322,944 points; 2) The United States Champion, Doug Leighty, 21, of Carlisle, PA with 290,986 points; and 3) Thomas Magnusson, 19, of Malmo, Sweden with a total of 272,195 points.

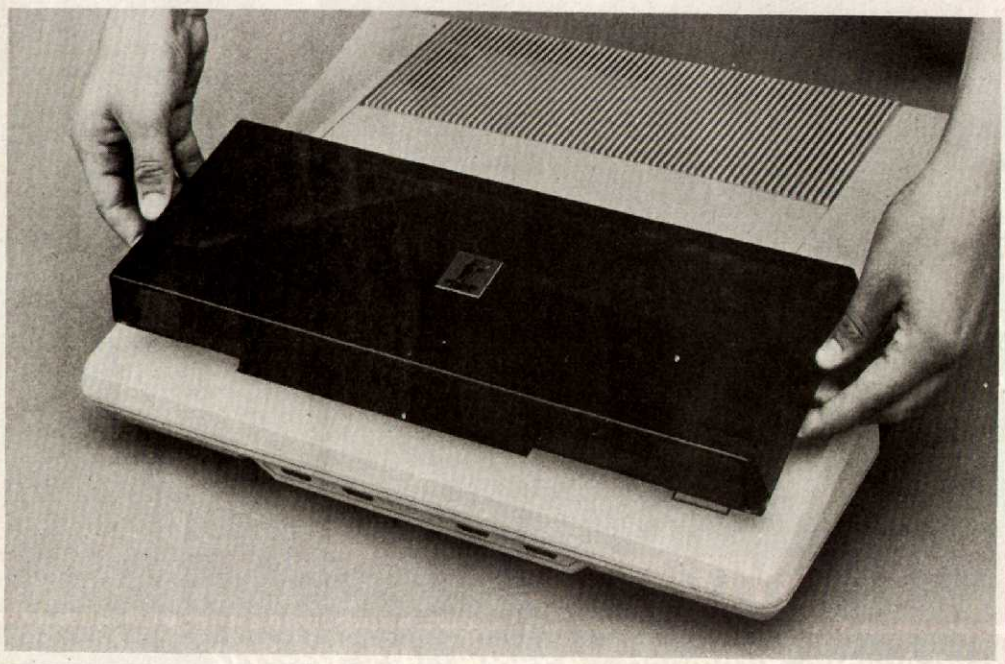
Each of these winners will receive a seven-day, all-expense-paid trip for two to the 1984 Olympic games in Los Angeles, plus an Atari home computer.

—MG

Undercover

For those who hate the thought of housework, and own a microcomputer, there will be one less chore to do, since the job of dusting the computer keyboard can be virtually eliminated! Penguin Products has introduced the K-Cover, an anti-static, unbreakable computer keyboard cover which fits most microcomputers. Damaging dust and debris is kept out with the use of this angled lid, which can also serve as an angled rise for a computer or monitor. Another plus for this cover is its lifetime guarantee against breakage.

—MG



Meet Me in St. Louis

In late November, Atari opened the first in its new concepts for arcades: Atari Adventure. The first unit in St. Louis, MO., features a three-pronged approach to video and computer games, including a standard arcade area, a computer learning center and the high-technology display.

High-tech is the operative word for the Atari Adventure locations as they will be designed with a futuristic motif. The entrance spotlights an "exploded view computer" showing all of the machines components. The computer also uses a voice track which invites the patrons to "come in and touch tomorrow."

The eight-spot Computer Learning Center provides time on an Atari XL computer workstation and will carry Atari software, Atari Apex software and some software from other companies. A certified computer learning instructor will be on duty at all times to assist customers and special classes in programs such as BASIC and VisiCalc may also be offered.

Atari games as well as favorites from other manufacturers will be available in the arcade area while the high-tech display provides hands-on experience with the latest of the company's technological developments. Some game prototypes will be included in the display.

A second Atari Adventure is also slated to open in the Midwest during the winter and if the concept lives up to expectations, it will be followed by many more, the company says.

—MCB

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Favorite Department is this issue: _____

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What do you think of Interview: _____

How does this issue of *VIDEO GAMES* compare to previous ones?

The same _____ Even better _____ Best so far _____ Never mind _____

Why? _____

Other than *VIDEO GAMES* which magazines do you read? _____

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GAME AND COMPUTER SECTION

How much money do you spend on video games per week? _____

Favorite new game: arcade _____ home _____

Biggest disappointment: arcade _____ home _____

What home game system do you own? _____

How long have you owned it? _____

How many hours per week do you play? _____

If you would get another system, which would it be? _____

What home computer system do you own? _____

How long have you owned it? _____

What peripherals do you own? _____

What is your favorite software/game or otherwise? _____

If you would get another system, which would it be? _____

How much computer software and/or video games do you buy each month? _____

Do home and arcade game ads/computer product advertising in *VIDEO GAMES* influence your purchases and selections? _____

What influences you in buying a video game/computer software?

Magazine/newspaper ads _____ Radio _____ TV _____ Word of mouth _____ Other _____

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HOLLYWOOD-STYLE BITS AND BYTES

Whiz Kids' Executive Producer Phil De Guere Takes You Behind the Scenes of His Hit TV Series

Photos courtesy of CBS

By Richard Goodwin

"I want to overcome what appears to be peoples' innate fear of computers at an early age so that they won't have any fear nor will be particularly in awe of them," says Executive Producer Phil DeGuere of his new TV series *Whiz Kids*.

At the time he was speaking, it was January and CBS had just given him the go-ahead to prepare a pilot. After the pilot was delivered in April, the network gave him a series commitment to produce the successive episodes.

It wasn't until this past June that *WarGames* opened and DeGuere, who wasn't overly thrilled with the summer smash, goes to great lengths to make people aware that there are no similar-

ities. In fact, he says, the idea was hatched more like a year-and-a-half ago, before *WarGames* even went into production.

DeGuere, a large, slightly rumpled appearing Californian, is one of Universal's most successful television producers. He has been with the giant studio for nearly a decade and has had a string of popular series including *Baa Baa Black Sheep* and the current hit, *Simon and Simon*. A long time fan of science fiction, DeGuere feels the new series, now seen on Wednesday evenings is living up to the original meaning of science fiction. He's taking today's technology and expanding upon it in fictionalized settings.

"The important thing is versimilitude and not accuracy," he says while seated in his large office. "You should feel when watching it that it's the real thing. I think we've succeeded in that because consistently, computer professionals have enjoyed the pilot and even though they know better than anybody that there are impossible things being done in that pilot. It's not like having a Volkswagen fly...it's not that impossible."

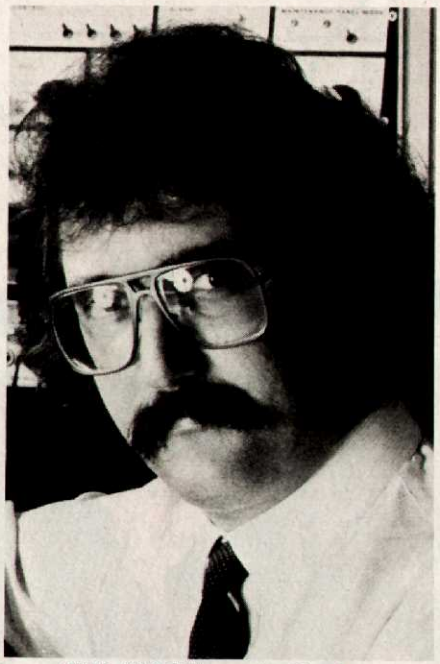
Computer fans will find many identifiable machines on the show with most of the major companies represented in one way or another. "I've got to differentiate between what are essentially props on the one hand and working gadgets on the other," DeGuere explains. "In terms of props, you're going to see things like Apples and Ataris. We have been using some Aquariuses from Mattel and if Coleco ever comes up with ADAM, I'm sure we'll use that, too.

"On the higher tech side, we'll have some of the hot portable computers like Gavilan and Compass, all of which basically are things people sit at. There may not be any systems functioning during the course of the show.

"When it comes to real working gadgets, it appears that we have worked out an arrangement with Xerox to use what is probably the most sophisticated personal computer in existence, the Xerox 1100, which is such an expensive machine and was responsible for some super-high resolution graphics in the pilot. After some modifications to the machine it will be capable of generating some great graphic material."

DeGuere shifts a bit in his chair, runs a hand through his tousled hair and adds, "We're into some robots. We're using one called RB5. They're pretty amazing machines. RB5 is like an R2D2. We're planning to incorporate it into some classroom situations."

The computer whiz and focal point of the series centers around Richie, the "hacker" played by Matthew Laborteaux. He's surrounded by three friends with varying degrees of interest in computers but all love the adventures. There's Hamilton Parker (Todd Porter), the freshman class president; Jeremy (Jeffrey Jacquet), the resident jock and Alice (Andrea Elson) who wants to belong to the gang. Richie is also forced to deal with a younger sister (Melanie Gaffin) who wants to be in on the action but is either too scared or perhaps intimidated a bit by Richie.



Whiz Kids' *Executive Producer Phil DeGuere.*

The youngsters go to a progressive California high school with a full complement of computers and an exasperated teacher who is always bested by Richie. When danger lurks, though, the kids turn to Farley (Max Gail, best remembered as Wojo on *Barney Miller*), the crime reporter for the local paper.

Originally, the kids were teamed with a younger reporter but CBS decided a more adult, experienced role model was needed to offset the youthful exuberence of the stars. Also representing the adult world is a cop named Quinn, played by A. Martinez. And to keep things interesting, the cool and dapper Quinn dislikes Farley, a Damon Runyeonesque-type of guy.

As seen in the pilot, the adults do not appear to be the brightest of people and DeGuere explains it's done on purpose. "The focus of the show is on the kids. We want them, the underdogs, to succeed. In order for that to happen week after week, the adults have to tune them out," he defends. The first story has Richie and the gang bringing down an overambitious vice-president of a mammoth conglomerate. The story, while amusing, raised the ire of critics by the cavalier actions of the kids.

At a promotional meeting held early this summer, DeGuere defended his show with characteristic bluntness. "I insulted them personally and I insulted their family and I insulted their heritage, their future generations, their profession and just about anything else I could think up. The major attention being an attempt to get them off this idea that they have uncovered some horrible sin. I think we were very successful in doing that."

DeGuere says his series won't show the kids breaking into computers and invading peoples' privacy. Rather, the repercussions of such actions will form the core of some segments. "We were responsible on those subjects from the very beginning," he points out. "There is something synergistic about a computer program. A computer program does things that a computer designer does not always intend. Even if you sat down from scratch. If the armed forces came to you and said, 'Here's all the money and time in the world. You're going to start from scratch with the hardware and software. Build us a network that is totally secure.' I don't think it could be done. That's one of the things that's so fascinating about computers—the program ends up being more than the sum of its parts. Even though, in most states, there are statutes which state that accessing another computer system without permission is against the law."

Whiz Kids will benefit from the experience of two consultants, adding a level of technical accuracy other films and television programs have missed. David Gunn worked on the pilot and was signed on by DeGuere for the duration of the series. "He's very knowledgeable in the field of microcomputers and I'm fairly knowledgeable myself," he says. "We have a technical advisor

Computer fans will find many identifiable machines on the show with most of the major companies represented. Pictured above left to right are the stars of Whiz Kids*: Todd Porter, Matthew Laborteaux, Jeffrey Jacquet and Andrea Elson.*

on the show who is an investigator for the District Attorney's office and is a peace officer who has specialized in computer crimes for years. So, when it comes to areas of legality on the one hand and technical accuracy on the other, we go to him. This is a very tiny portion of what's going on in the series. I personally would prefer the technological aspects to be handled as accurately as possible and I would rather have it believable than sound stupid.

"In many cases we will have characters spewing a lot of jargon and it happens to be true but it's not intended to be something the audience has to follow. It's like medical shows where the doctors are talking about this and that," DeGuere explains.

The series will be a fast-paced mixture of adventure and intrigue that usually has the kids stumbling upon a problem and then acting quickly to stop the crime or criminals without getting caught or killed. Added to the stories will be glimpses of their home lives and interrelationships. DeGuere repeats his hope that the show catches on and finds an audience so he can have the kids grow and develop, something fairly unique to series television. "If the show clicks, we have cast it in a way that allows us to follow them right on through college," he optimistically offers.

When not in school, the kids will be clustered around Richie's home computer and trying to crack cases. Richie has built a complicated system that would be any hacker's dream including a voice-activated system named RALF complete with camera and robot appendages (this way Richie can eat a sandwich while using both hands to manipulate the keyboard).

DeGuere offers some upcoming storylines as examples of the broad mixture of the series. "Richie has a friend who he has met at the computer store, who happens to be a data processing manager for a local chemical company. As it happens, they have just installed a new computer security program and he thinks the best way to test the program is to have a hacker like Richie try and break it. He hires Richie who breaks into the system and discovers a Trojan Horse buried in the computer. There's a program running inside the computer, developed by a bunch of unscrupulous people working at the company. These people are in the process of doing chemical biological warfare of their own, for sale to unfriendly third world nations.

"Needless to say, the project manager quickly disappears and Richie is the only one who knows he's in trouble. He doesn't know why but he knows his friend is gone. The kids unravel the mystery." The show will also feature a guest appearance by *Simon and Simon*'s Jameson Parker in a bid by DeGuere to help link together the two CBS series. Later in the season when the Simons need some computer expertise, they will approach Richie.

"Or," DeGuere offers, "There is a computer used in the San Fernando Valley linking all the policemen to the department's computer. It's been the subject of a lot of articles because of cost overruns. Our story suggests that a clever criminal can figure out how to emulate one of the Mobile Data Terminals or the host computer. These are a bunch of bank robbers who figure out that with some high tech stuff, they need only 15 minutes to get into the vault, get the money and leave. All you have to do is make sure all the local police units in the area that could respond to the call are unavoidably detained for 15 minutes.

"That's what they're doing at the start of the story. Everyone thinks it's a matter of computer error until Richie says, 'There's no such thing as computer error. It's people error.' They go on to prove that by stumbling on to the criminals."

During the conversation, held long before the series finally premiered on October 5, DeGuere points out things are still developing. "We are, at the moment, waiting to see how several different approaches to storytelling turn out on film. Right now, I'm just seeing the rough cut of the first episode after the pilot. So I'd say we're in the gestation period right now. We are not one hundred percent sure of what mutations are going to be appropriate for this particular child. None of the things are quite formulated yet.

"We're trying to inject and build into the scripts as many solid entertainment values as we can. We want to have characters you care about, relationships that feel real and a general sense of fun rather than try and throw everything about computers into it. We're trying to make it high tech on a lot of different

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Whiz Kids *offers viewers a fast-paced mixture of adventure and intrigue that usually has the kids stumbling upon a problem and then acting quickly to stop the crime or criminals without ever being caught. Pictured above is Richie and his friends who succeed in solving yet another crime.*

levels, not just computers.

"What happens on a new show, based on past experience, is that you don't know *what* is really working. I don't know until I get a chance to go home on Wednesday night and watch the evening news, watch the promos. I like to see how it leads into the movie and by that time, I will have begun to have an impression of what we're doing right and what we're doing wrong. Most series hit their peak, in terms of quality, in the middle of their second year. It's true of *Simon and Simon* and it's true of almost every other show I've worked on."

The show was originally scheduled to air on Saturday nights but over the summer CBS switched it to Wednesday explaining that it would be a better opportunity to attract the youthful audience a show like *Whiz Kids* needs as a base. There are more TV sets in use on a Wednesday and the competition is diffuse with ABC offering *The Fall Guy* and NBC serving up more *Real People*. This gives the show a better chance than if it was put up against *Different Strokes, Silver Spoons* and *T.J. Hooker*.

"My personal feeling is that the show will be given a reasonable chance to succeed. It will probably mean two or three weeks after the World Series and if, by then, it has not established an audience, I do not anticipate it will be moved around—I don't know where they could move it to, frankly."

As a result of researching the series, DeGuere who owns an Apple at home and has an office automation system in place, feels that he is fed up with computers. He complains of not being able to find the interest in running programs on his personal computer and has spent weeks getting the office system to work properly. Between that, researching the series, watching the critics nitpick *WarGames* apart and the press reporting every move made by the nation's hackers (most notably the 414 gang) he's fed up. "People are being bombarded about computers everywhere they turn. Take five steps and somewhere you'll be hit by the subject. Consequently, there may be an overkill factor involved. The best of all possible ways our series can benefit from *WarGames* is if a large number of our potential audience think that *WarGames* was a movie they might have wanted to see if they wanted to go to the movies."

Fact or fiction, reality or overkill, Phil DeGuere is hoping that his series, co-created with producer Robert Shayne, will find a place in the primetime sweepstakes. The idea is certainly unique and he is fortunate enough to have had the show in development when the rest of the world was just beginning to understand the important impact computers are having on our lives. Now, the question remains, do people care enough to tune in once a week and watch a group of students battle for truth, justice and the American Way using microchips, floppy disks and modems instead of guns, badges and sirens! ▲

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THE ART SIDE OF VIDEO GAMES

The Wave of the Future

By Mary Claire Blakeman

Video games have been accused of many things: They're called everything from educational toys for the computer age to time-wasting tools of the devil. And now it looks as though they have earned a new label: Art.

Not only has the Corcoran Gallery in Washington, D.C., held an exhibit of games called ARTcade, but manufacturers are increasingly turning to artists, musicians and performers for inspiration. Dragon's Lair used the classic animation artistry of Don Bluth Studios, while professional actors provided the voices for characters in Bega's Battle.

This new direction for video games is seen most vividly in the work of two California designers, John O'Neill and Jaran Lanier. The home cartridges Lifespan, by O'Neill, and Moondust, by Lanier, represent a shift away from the idea that new technology alone will create breakthroughs in the game world. Instead, they show that artistic expression can provide fresh perceptions about video game entertainment.

While playability features are intrinsic to the games, the goal in each is not to rack up points or kill aliens. Rather, they appeal to a level of the player's experience which is beyond hand-eye coordination. They offer exercises in creativity, visual or auditory gratification, and sometimes, personal insights. Also, these games are truly interactive in that the player determines the outcome and payoff which is different each time.

"Most of the games on the market are variations on the same game," says Lanier. "But John (O'Neill) and I are making games that live by their creativity rather than by a paranoid world view where the player is being attacked, or given simulated authority, or where the goal is to just prolong your survival. Our games work on a different level, with John's being more philosophical and mine being, perhaps, more evocative."

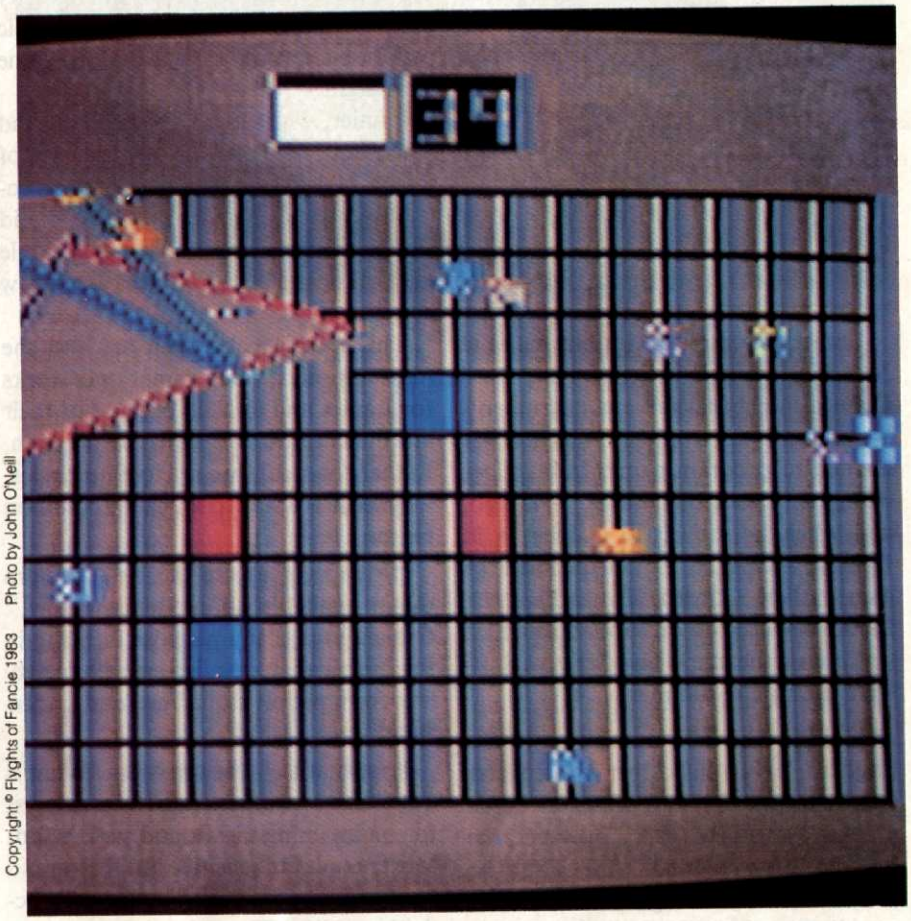


Photo by John O'Neill

Copyright © Flights of Fancie 1983

Scene from Lifespan: Pt #4 Situations and Conversations.

Briefly, Lifespan is a trip through all the stages of living from childhood through death. The player creates the kind of life they will lead by collecting various aspects of character in childhood and then travels through Opportunity Gates, Situation and Conversations, and the Experience Corridor before arriving at the Payoff, an intricate, colorful sound and light display. The Payoff, which changes in every game, depends on how the player maneuvered through life. Unlike computer text games, Lifespan uses standard looking play features such as a maze-like grid for the Situations and Conversations sequence and a bombardment of obstacles in the Experience Corridor.

In Moondust, a Spacewalker travels around the screen with several ships passing over a central energy field. The

player pushes a button so the Spacewalker can drop a square "seed," and then maneuvers the ships to pass over the seed. When that happens, a digital pattern appears and the player must move the pattern to the middle of the screen to score a bullseye. The player actually creates musical harmonies by moving the joystick and the multi-hued digital pattern corresponds to a new sound sequence after every round of play. (For details on the games see related articles)

Significantly, both games have an "art mode" in which there are no points or challenges, and the player can simply watch the graphics or enjoy the music. John O'Neill envisions some people using the Lifespan art sequence on a big screen television set. "They could put it on during dinner and have a beautiful computer art display in the living room," he says. All of his games will have this feature, O'Neill adds.

Lanier and O'Neill can create these kinds of games because they break the mold of game designers as "engineers turned programmers."

Lanier, a composer, studied music at New Mexico State University and Bard College and he plays several instruments including flutes from 20 countries. He learned to program games in a college computer class about three years ago, and when he moved to California in 1982, he worked for Epyx to produce the game Alien Garden. In early 1983, Lanier began work on Moondust which was put on the market by Creative Software during the summer.

O'Neill, who was born in Northern England, began his career as a painter and participated in the popular art scene of the 1960s. By 1971, however, he became disenchanted with what he called the "self indulgence" of the art world and so he turned his attention to mass art through postcards, decals and playing cards. In 1980, he met Stuart Rosen, who was at that time a product manager with Atari, and O'Neill discovered that video games were the perfect setting to express his artistic ideas and reach the general public at the same time. Rosen and O'Neill joined forces to form Flyghts of Fancie in 1982 and Lifespan was marketed through the Chicago-based Roklan Corporation.

O'Neill sees his work as part of a larger trend in the games market. "This industry is setting up opportunities for all sorts of artists, musicians and playwrights," he says. "Most of the games so far have been done by computer people. There's nothing wrong with programmers writing games but printers aren't the ones who write the books."

The designers both see the the need for artistic and creative input into the game industry if it is to survive and grow. "There is the cynical attitude about games as the 'electronic hula hoop' or passing fad and I think that can be true if they stay cliched," Lanier says. "Video games have to achieve the same degree of variety as books and records in order to survive. The business interests have to have the courage to invest in creativity because in a couple of years the public will be sick of the standard video game paradigm."

Lanier, who enjoys Qix, Q*bert and Quantum, echoes the sentiments of other players who wonder why companies rely so heavily on sequels and copies. "It amazes me how much people copy a success instead of creating a new one," he says.

This marriage between art and the mass appeal of video games only works for Lanier and O'Neill because of their attitudes toward creative expression. Rather than confine art to elite circles, they see it as a way to touch the common person.

"Video games are the best medium that's available to an artist today," O'Neill says. "My purpose in being in this business is to re-align art with society in a form people can afford and understand."

"So, that begs the question, 'What is art?'" he continues. "Art is a catalyst for maintaining vision and perception. Most people are sensitive but they are so busy and they get dulled by the daily activities of life. The artists job is to be a catalyst and re-awaken them. The artist is really a taxi driver to get a person from where they are to where they could be."

Games are particularly suited to this approach, O'Neill says, because they operate on several senses at once: "The medium offers a multi-dimensional approach to the senses of a human being. It's going in through the eyes, the ears, through storytelling and through an adrenalin rush in the body."

In addition to sensory stimulation, video games also require action rather than passivity such as in television viewing. This interactive quality was especially appealing to Lanier, who says he always wanted to find a medium for music that could be affected by the people listening to it.

"In composing, you spend an enormous amount of time choosing notes, but in interactive music it can always change and always be different with each new person," he says.

"A whole new sort of industry will arise between the record industry and video games," Lanier predicts. "And that industry will be interactive music."

In the immediate future, Lanier is continuing to work on projects involving interactive music, while O'Neill is developing new art video games. Slated for a December release O'Neill's game MORL again takes up life-like themes.

"MORL stands for Middle of the Road Lizard who's a cross between a person trying to live in the middle of the road and a lounge lizard,"O'Neill says.

The MORL character, who has a girlfriend named MORLINA, tries to maintain a position in the center of play while maneuvering through the game. If he leans too far to the right, he moves so fast he gets a heart attack; and if he favors the left side, he slows down so much he drops out of life. When he gets wounded, however, MORL can get patched up with kisses. A unique feature of the game is the player's ability to view colorful squares in MORL's brain to see how he is operating. Ultimately, MORL's desire to grow transforms him into a greater being and O'Neill promises a fantastic flying sequence as the finale of the game.

Another game on the boards, DAY, is described as "four-dimensional tic-tac-toe" in which the player aims to have as rich and rewarding a day as possible. Competing with others on the screen for use of the day, the player zooms up and down over the landscape getting different perspectives on activities.

"In DAY, the player's dreams lead into intentions," O'Neill explains. "Then the intentions lead to action, action leads into memories and memory decays into dreams again."

While MORL and DAY are among O'Neill's immediate concerns, he and Stuart Rosen have big plans for Flyghts and Fancie. Already the company is pursuing a cable television deal with Time-Life and is making plans for video discs

Lifespan

Playing Through the Stages of Living

Lifespan begins as a glowing spiral of light accompanied by futuristic music. Five bits of light evolve into colorful shapes which then bounce around a square block, or the "playpen" of the Childhood sequence. In this brief period, the player attempts to trap as many characters as possible.

"The more aspects of character you trap, the more years in your life," says Lifespan's designer, John O'Neill. "If you get all four, you start out in life as a precious little bugger."

As childhood ends, the screen gets darker and the player heads into the "cold, dark of adult life." The adult encounters choices in the Opportunity gates where the character shape is in the middle of a screen traveling through outer space. Using the game controller, the player zooms through space looking for opportunities and pulling back hard on the joystick when appropriate ones are found. As the opportunity grows, a pinpoint of light expands to reveal an opening or "gate" through which the player enters the next phase.

"As in life, you are looking for the best opportunities, but there are tradeoffs," O'Neill says. "You can't go back for missed opportunities and if you wait too long for the perfect opportunity, you may miss it."

The next phase, Situations and Conversations, puts the player on a grid in which aspects of character are important to success. The objective is to become interesting to the "inhabitants" so the player can be accepted into a conversation. With a depth of character, the player has to touch fewer "common interest" blocks on the grid in order to become a glittering object. Once the player glitters, he stands a chance of getting into a conversation among other dot-like "inhabitants" of the grid. But if the player is run over by one of the dots, his progress is greatly reduced.

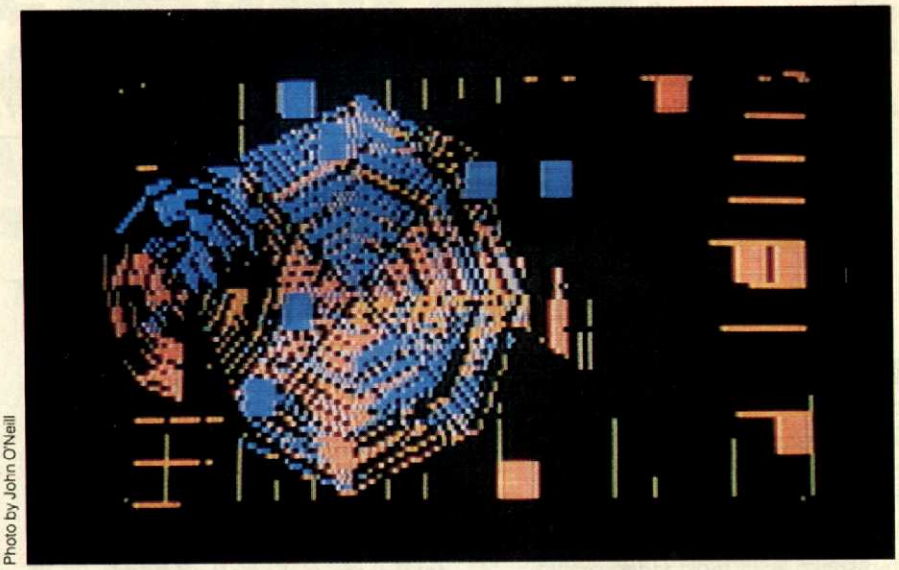


Photo by John O'Neill

"You have to get into a conversation that is big enough and remain in it long enough for them to take notice of you," O'Neill explains. "Otherwise you may stand around all glittering with no one to talk to."

Once a player successfully enters a conversation, however, all the other "inhabitants" of the grid focus full attention on the player's character, the screen lights up and the soundtrack provides amiable electronic beeps of discourse.

No sooner does the player get out of the Situations and Conversations than he is thrown into the Experience Corridor. Speeding bits of light, representing worries, fears and doubts, bombard the player who can only survive by touching white dots of hope. Occasionally, night time approaches and the screen goes black, leaving the player to fend off problems in the dark.

In the Experience Corridor, and throughout the game, a health gauge also restricts the players movement. For example, in the Opportunity Gates, the player has to avoid the walls around the opening. "I can't play selfishly," O'Neill says. "I have to consider my environment because if I don't I'll damage my health."

Similarly, in going through Experiences, the player has to survive with his health intact. Once that segment has been successfully completed, the player returns to the Opportunity Gates with a second character type or shape.

Eventually, the player acquires more character types and once all five are collected, the entire life flashes on the screen in an intricate and colorful light and sound show. This Payoff sequence is different each time the game is played and it reflects how well the player has done with his Lifespan. A standard numerical score showing the number of years left to live after negotiating the entire game also flashes on the screen. The artistic Payoff can also be punched up on the screen without playing the game.

"My purpose in doing the games is really art, so I wanted people to be able to enjoy the Payoff sequence whether they play or not," O'Neill says. "But for those who do play, Lifespan can give them an insight into their lives. It is a chance for a person to step back and look over their own shoulder for a little while."

Lifespan is manufactured by the Roklan Corporation of Chicago and is available for the Atari Home Computer and the Commodore 64.

—Mary Claire Blakeman

and international satellite networking.

O'Neill predicts that video games will lead to sophisticated sensory entertainment and stimulated environments in the distant future. "By the 21st Century, we will have software creators, playwrights, who will take you on imaginary journeys," he says. "The video games we have now are really the Stone Age compared to that."

Whether that scenario turns out to be accurate or not, O'Neill says that now is the best time for artists to be involved in video games. In the development of any art form, he says, there is a honeymoon period when limitations can actually spur greater creativity.

"Restrictions help define purpose and while that exists all sorts of things are possible," O'Neill says. "In the lives of any great artist, there was a period of time when they were just feeling their way toward what they would do and they go through a period of rebellion. If they can stay stupid long enough and child-like long enough, they eventually discover this new thing. But then they get so used to it and so clever that they just start to embroider on it."

"When you're breaking new ground, that's when it's totally exciting," says O'Neill as he compares the current period to the early days of movie making. "In my opinion," he says, "We're heading into the Golden Age of video games." ▲

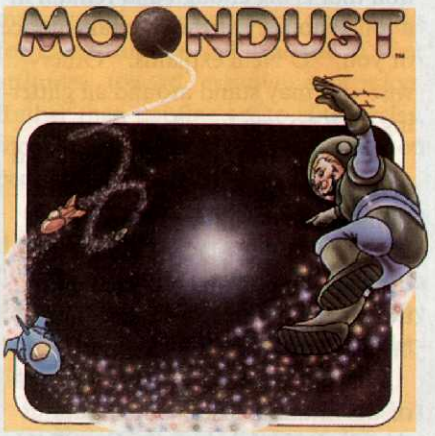
Moondust

Music of Your Own Making

Moondust offers for play styles including Beginner, Evasive, Freestyle and Spinsanity. While each segment offers different challenges, the fundamental motions of Moondust are fluid and curving rather than abrupt and sharp as in most video space games. And, unlike other such games the object of Moondust is not to destroy aliens, but rather to spread moonjuice over a bullseye in the center of the screen. In the process of doing that, the player creates colorful digital patterns of light which in turn program a musical sequence of notes which change with every round of play.

A white-suited Spacewalker, who game designer Jaran Lanier calls "Jose," travels around the screen within a pattern of several moondrop ships. (Lanier says the Spacewalker is named for Jose Scriabin, a Russian composer who wrote music for all five senses.) To master Moondust the player must realize that the Spacewalker is not the central focus of the game, but rather a part of the whole scene.

In game action, the player uses the Spacewalker to drop a seed square and then moves the ships with the joystick, getting them to pass over the square. The ships then "smear" the square across the screen forming a digital pattern and pleasant musical harmonies. The object is to get the pattern to the center of the screen to score a bullseye before it runs out of moonjuice. Once the bullseye is hit, the energy field will move in a dance-like motion and the number of points earned on the seed will appear at the top of the screen. The player can get some points even if the bullseye is missed and that score also appears after each seed, along with a running total score at the bottom of the screen. The player gets three "seeds"



per game and can earn "bonus seeds" for each bullseye.

Occasionally, the Spacewalker will get hit on the head by one of the moondrop ships and when too many of those occur, the Spacewalker is "knocked out" and the player scores no points for that seed.

In the Evasive mode, the seed square does not remain in place for the ships to "smear" it, rather, it rushes to the edge of the screen and the player has to catch it before it disappears. In Freestyle the ships do not directly follow the joystick movement, but the Spacewalker does. Lanier admits that he even has a hard time with the most difficult mode, Spinsanity. In this segment, the ships move in a spiral pattern and it is difficult to maneuver them over the seed square.

"In regular Moondust, everyone is going clockwise and if you press the button, you can switch the ships to a counter-clockwise motion," Lanier reveals. "In Spinsanity if you press the button over and over, you can make the ships go in a straight line, but that only works in that segment.

Lanier also advises players to turn up the color controls on the television set to get the most out of the game. After he designed Alien Garden for Epyx, Lanier says he was disappointed to learn that some people thought the game was done in black and white simply because they did not adjust the color knobs on their game sets. The colors are important to Moondust since much of the payoff is in its visual effects.

The player also has the ability to create music with the game each time it is played. "It's interactive because it changes each time and if you don't move the joystick at all, the music stays the same," Lanier says.

Since the game appeals to a more subtle level of experience, players may have to relax their concentration to get the most out of it. "You simply can't use your conscious mind because it can't keep track of eight things at once," Lanier says.

Because it departs so much from standard video games Moondust may seem geared to adults. But Lanier says children like it, too.

Marketed through Creative Software of Sunnyvale, Ca., Moondust is available for the Commodore 64.

—Mary Claire Blakeman

THE LASER AGE CONTINUES

A New Technology Brings Remarkable Change

By Mike Shaw and Roger C. Sharpe

Every major trend in the coin-op industry, over the years, has resulted in the sudden appearance of new participants onto the scene hoping to cash in on the anticipated boom times. Some rapidly vanish from the picture, arriving too late with too little to have any measurable impact. Others find a ready and willing marketplace for their products and remain actively involved in the continual evolution of the business.

This has been the case when pinball was at its height of popularity back in the mid- to late-Seventies and when video games began their ascent at about the same time. Now comes the laserdisc age and, already, we are witnessing new companies and individuals joining the ranks of more established firms.

The majors, for the most part haven't

Photo by Eric Bergman

been idle in developing their own systems, however the rapid emergence of Dragon's Lair the past few months, has tended to speed up the timetable. When Sega initially introduced Astron Belt last year, for the first time, coin-op businessmen saw that disc technology could be incorporated into conventional cabinet designs and be a viable addition to arcade entertainment.

Previous to this demonstration, video discs, as a broad-based category, had been limited to industrial applications and some moderate success in the area of home players along with pre-recorded programs. The problem, however, was in the public's willingness to embrace this home entertainment option given the strength and acceptance of video cassette recorders as a suitable medium which not only delivered tapes of feature films and other attractions, but also allowed individuals to throw away their 8mm movie cameras in favor of cassette cameras as well as recording and playing back on-air programs whenever the mood struck.

In comparison, further advances in state-of-the-art disc functions and features were left to a few, isolated experimental displays of more interactive formats, which, because of the lack of sales and interest in the technology, lagged far behind in gaining any awareness or attention. There were attempts to bring a number of quiz games to market, along with Vidmax's entry, their Mystery Disc series, but the small amount of home disc players has had an overall impact of keeping a lid on massive progress.

As for the coin-op industry and its parallel course, the past two years have been made up of anxious moments. From the peaks reached during Pac-Man fever, videos have rapidly fallen from the limelight, losing much of their luster and excitement. This despite the fact that the industry continues to grow in size—there are more video games in more locations than ever before (about 1.5 million video games in the United States alone). In fact, in 1983, players showed relentless apathy, opting to save $2.3 billion for other kinds of entertainment. From a record $7.7 billion in 1982, the gross video game earnings for 1983 fell to $5.4 billion.

Although the makers of video games were able to capitalize on industry conditions in 1982—many actually benefited by issuing constant recreations of the same theme, games that became obsolete so quickly that arcade owners had to replace some equipment every few months in order to hold the interest of their players.

Photo by Eric Bergman

Pitchman's Dr. Slye (above) is an ingenious effort that combines live-action film footage with video generated images for an interactive experience unlike any other.

The crossroads had been reached and the arcade business looked to some type of technological breakthrough for its salvation. Laser discs were waiting in the wings ready to take on the challenge, although not to the extent of what has been the case during the past six months.

The rush to bring products to market, in time for the AMOA convention, has resulted in a shortage of hardware systems and even blank discs on which the various game scenarios must be translated. The floodgates have opened with full force as the latest laserdiscs are being introduced into arcades across the land. The early arrivals (previewed in December Video Games) have been either modified or now find themselves in the company of many other competing models.

Mylstar's M.A.C.H. 3 (reviewed on page 56) has undergone a cosmetic transformation of sorts with the addition of improved musical effects and speech, while Stern Electronics, via a licensing agreement with TMS Electronics, has hit the scene with an animated film disc game called Cliff Hanger (page 52 of this issue). However, there's still more on the horizon; led, interestingly enough, by an individual and his company which are relative newcomers to the coin-op world.

The word 'relative' is used advisably since Robert Walker has already gained widespread noteriety for his Laser Disc Computer Systems corporation based in Boston. In fact, The Yankee Group, a well-respected Massachussetts marketing survey team, has already referred to LDCS as a 'dominant force' in the industry.

Well, if LDCS is going to dominate, it will be through the promotional genius of its president, the Don King of the video world, Robert Walker. It can't be claimed that Walker was the only American entrepreneur who warmed to the world of video games when he saw the numbers behind the phenomenon. His interest was aroused by this new fascination that had suddenly become the world's most prolific entertainment business.

Being a promoter by trade—he had headed the highly successful American Program Bureau with clients that approximated a who's who of international notables—Walker had been lecture agent for such individuals as Ronald Reagan, Ralph Nader, John Glenn, Jane Fonda, Joe Namath and Willie Mays.

However, there was something about the video game business that Walker found intriguing, while the bloom was

irrefuteably off the rose, he reasoned, there were still billions of dollars being poured into coin-op machines by a firmly committed generation of players.

More important to his direct involvement was the fact that Walker saw the industry with its collective palms turned skyward. "Laserdisc technology was the penicillin for a sick industry, I could see that," Walker told *VG*. "So I started talking to operators and distributors to find out what they would like to see from a manufacturerer of laserdisc games. Then I orchestrated a group of engineering minds into a strong staff and we began work on our epic."

The epic Walker was referring to is another addition to the laserdisc line-up if you're keeping track. Eon and the Time Tunnel not only received incredible advance publicity, but it was also ushering in the age of dual disc games.

With Walker and his staff (including an Emmy award winning film producer) often working around the clock on Eon, the LCDS engineers seemed to adopt the Walker attitude—relentless pursuit of a positive ideal. And, indeed, the effort was rewarding. A *Wall Street Journal* reporter who saw Eon called it "a vision worthy of Steven Spielberg or Salvador Dali."

Briefly explained, Eon was to be a tour through history. It included film footage of such relics as eerie ancient Welsh castles, as well as allowing players to travel through the 'time tunnel' to get to points of futuristic intrigues and challenges.

But as Walker's geniuses were putting the final touches on the epic, he was also becoming more familiar with the coin-op industry and those individuals and executives responsible for the policy-making decisions. After enough meetings, Walker was convinced that he needed to modify his plans and regroup LDCS's activities. He was told that the game represented such a leap ahead that it was tantamount to putting the world's most sophisticated computer into the hands of a ten-year-old. The world just wasn't prepared for Eon. It would be wasted.

In looking back on the ordeal, Walker stated that "we had been thinking we had something that wasn't good enough. We wanted to produce the *Gone With the Wind* of video games, but were advised we'd be better off starting with the Pong of Laserdisc.

Well, the months passed and Walker looked at his options—single disc or dual disc game; going to another manufacturer, or producing the effort himself and the decision was to opt for a single disc game which Stern will be releasing during the first quarter of 1984.

Pitchman is an ingenious effort that combines live-action film footage with video generated images for an interactive experience unlike any other. A lead character, Dr. Slye brings a world of magical powers and graphic visuals to life with effects that embellish the challenge of pitting a player's skills and reflexes against this worthy adversary.

Slated to be unveiled for private, exclusive showings during the AMOA at the end of October, Pitchman should prove just how far Walker and his company have come in realizing their goals, although one can't help but wonder if Eon might be lurking in the background ready to take us to yet other new frontiers of video game playing. ▲

Thom Kidrin and Robert Walker of Laser Disc Computer Systems, considered by many to be a "dominant force" within the industry.

Arcade Games

Playing Tips and Strategies

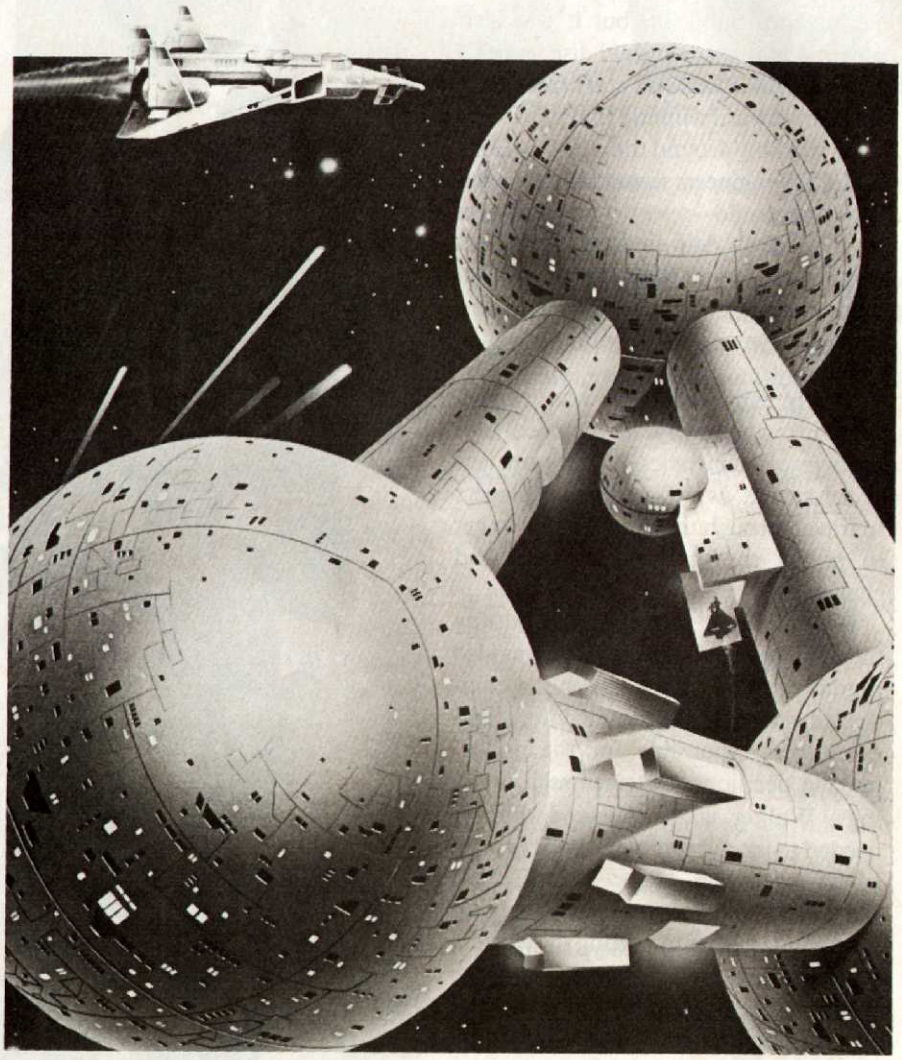
By Steve Harris

GYRUSS

Gyruss from Centuri could also be described as Galaga meets Tempest. It combines the three-dimensional 'shoot down the tube' effects of Tempest with the play themes and mechanics of Galaga. In addition to the visual impact, the game features some of the best electronic music reproduction in the world of coin-op today: a futuristic rendition of Bach.

The game places you in command of the spaceship Gyruss, on a mission to rid the solar system of an invading armada of intergalactic warships from the Ideoclan Empire. Clearing a field of invaders will warp Gyruss to the next attack, and get you closer to your goal of reaching Earth.

Description: Gyruss opens with your ship just outside the orbit of Neptune. Your controls include a joystick, which will guide the craft around the perimeter of the screen, and a fire button which can fire up to 3 salvos at once. Suddenly, a group of 10 alien craft will shoot out of space, then spiral into a circular formation in the center of the screen. Almost immediately another set of warships appears, firing their proton bombs as they advance. Finally, two more sets of aliens will materialize and join the formation. If you have destroyed a large number of the Ideoclan forces, a fifth set will appear and the attack begins.



As Gyruss orbits the sides of the screen, the alien ships will break off from their formation and begin flying outwards. As they fly close to Gyruss they begin emitting bombs, and, in some instances, the enemy craft will attempt to ram Gyruss head on.

Besides their star fighters, the Ideoclans have several other types of warships at their disposal. Beginning in stage one, they'll release their orbiting satellites. These craft sway side to side while constantly releasing bombs. Although they first appear to be a menace, the satellites are a great asset. When you first encounter them there will be two gray, triangular ships, with an orange, star-shaped vessel in between.

By carefully shooting the orange

satellite, your ship will be endowed with double fire power. This greatly enhances your chances of destroying a formation quickly. When you already have double fire power, all three of the satellites will be gray, with no orange ship. You can eliminate the satellites and score 1,000 for the first; 1,500 for the second; and 2,000 points for the third.

Starting in round two, there's another object you have to be on the look out for. Meteors will begin streaking out of the distance to the border of the screen, in an effort to collide with Gyruss. Only one meteor will appear at a time, however, once one exits, another will take its place. The meteors can be shot, and though it won't destroy the rock, it will add 100 points to your score.

The last members of the Ideoclan's Armada are the resistor shields, which appear on wave 5. These small ships float outward, slightly apart, with a wave of electron energy coursing in between them. Getting hit by one of the shield units or running into the electron waves, will destroy Gyruss. If you shoot one of the resistor units, the wave band will cease and the remainig unit will continue to float away unless you hit it.

After you've cleared 2 fleets of ships, Gyruss will be transported to the planet Neptune. While on Neptune you must complete a 'chance stage' (Gyruss's equivalent to Galaga's challenging stage). The object is to destroy 4 sets of 10 ships which follow predetermined patterns. For every ship destroyed, you're awarded 100 points at the end of the round. If you shoot all 40 enemy ships, a 10,000-point bonus will be given. After the challenging stage, Gyruss warps to the next fleet of ships and the battle continues.

After Neptune is conquered, you must make it to Uranus, Saturn, Jupiter, Mars, and Earth. To reach a planet you have to liquidate 3 fleets of alien craft (3 warps). Once you've finished the chance stage, you must finish off 3 more waves to reach the next planet, with each one successively more difficult.

When Earth is found (the 23rd warp) and the chance rack is completed, Gyruss will be transported back to Neptune and the action begins all over again.

Strategies: Succeeding at Gyruss depends primarily on your knowledge of the game and its patterns. The difficulty of a stage relates directly to how many ships you destroy before they reach formation. If many remain you'll have to battle them longer, and in turn have a higher chance of getting hit. Also, knowing the patterns to the chance racks is imperative to getting the 10,000 bonus every time.

You'll notice that the enemy fighters (on all levels) react in several ways. Some will break off and fly right and left, in large arches, or circles, firing missiles as they go. Another type of flight pattern will take the alien ship to the extreme border of the screen, (where it can ram your ship then back to the center, back and forth. The remaining ships move in an erratic way, quickly back and forth, firing loads of bombs as they go. Once these ships reach the outside of the screen, they'll disappear and return to the center formation. When destroying the ships while they're in formation, try to wipe out one side of the fleet (like the bottom), then stay there and let other ships come to you. This is much safer than running and dodging the enemy and their bombs.

Always try to hit the orange satellite so you'll have double firepower. Be careful, however, when trying to do so on 'Earth' waves. It is sometimes more advantageous to wait until you make it to Neptune once again, rather than trying to hit the satellites at the higher speed.

The meteors, which arrive on stage two, try to get you into a situation where you have to move into them. If bombs are coming from the left, the meteor will streak to the right, effectively trapping Gyruss.

The resistor shields, which make their first appearance after Neptune, will randomly emerge from the middle of the screen. To eliminate their danger, shoot at least one and move away. Be careful, though, the resistor waves won't stop for a few seconds after you hit one of the pods.

When following the strategies outlined for each planet, remember that they merely tell where to position Gyruss to catch the enemy as they come on the screen. Once they begin firing, you must move Gyruss to a safer position, preferably near the next place where more ships will appear.

Neptune

Destroying the aliens at Neptune is very easy, not only because of their reduced speed, but also because of the way they enter the battle.

Start by descending to the bottom of the screen. The enemy ships will begin at the top, then spiral downward, toward your position. Fire at them, then break to the right to avoid their bombs. While in the lower-right corner of the screen, wait for the second group to appear. When they do, shoot and move back to the lower left corner. The third set will circle to this position, leaving you to destroy as many as possible, then flying to the top before their bullets hit you. The last set will enter toward the top and fire. If you destroy more than ¾ of the fleet, another wave of attackers will appear, using a formation from any stage except Earth. Shoot as many as possible, then concentrate on whatever ships remain in the fleet.

Neptune's chance stage is also very easy to complete. Begin by placing Gyruss at the top of the screen and destroy the first set. Next, move to the bottom and fire at the second wave of attackers. Stay at the bottom to fire on the third set of ships, and move to the lower left corner to complete the final group.

Uranus

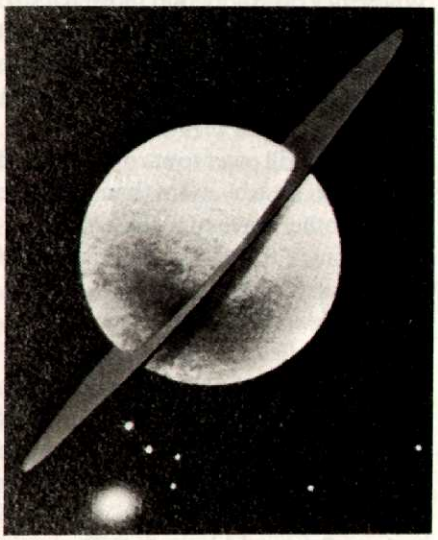
The three warps of Uranus are the easiest of any in Gyruss. Beginning with these three warps, the fighters will break off from the main group as they fly in and attempt to ram Gyruss. Shoot them if possible, but if need be, move away. Start in the lower left corner and fire immediately as the enemy appears from this side of the screen. Follow them to the lower-right edge and wait for the

second group to appear. After battling the second set, move to the upper right to attack the third assemblage of craft. Once you've encountered them, move to the upper left and fire to get rid of the fourth wave of intruders.

Completing the second chance is a bit harder than the first. Move to the bottom to destroy the first 5 craft, then move to the right side to destroy the remaining five. The next set of ships appear from the lower right, so position Gyruss at 4 o'clock and fire. The group after that will appear in two locations again. Destroy the first part of the screen, then move to the right to finish off the rest. The next group will appear in the upper left. Eliminate them and head to Saturn.

Saturn

Begin the Saturn warps by placing Gyruss to the left of the board. Fire as the ships appear from the upper left to

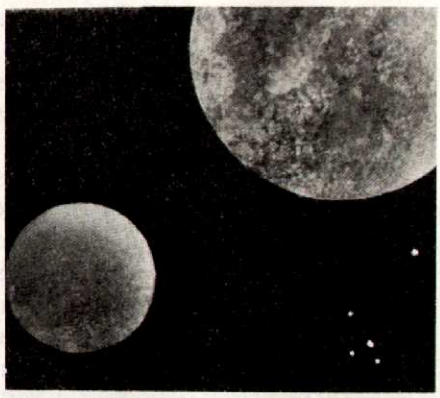


catch them in the crossfire. Next, move to the lower right to ambush the second assortment of craft. Move to the lower left and fire as the third set flies in from the bottom. Then circle to the top and follow the enemy to the left when the final formation emerges.

The ships on the 3rd chance stage move out of the center of the screen so some care must be taken to correctly place Gyruss in the right location. Start at the bottom of the screen and destroy half of the first set. Then fly to the top to blast the rest. Move to the bottom and eliminate the second allotment when they converge. The third group is again broken in two. Destroy half at the bottom of the curve and get the rest at the right. The last set can be terminated at the top.

Jupiter

Unlike most of the other stages where Ideoclan ships enter from the sides, this round presents alien craft which enter



from the middle. The fighters will fly out to the borders then turn and head back to the center to join formation.

Your initial move is to the top. Shoot the enemy ships as they advance. Then move left to avoid their bombs. The next fleet of fighters will come from the bottom and veer right. Wait at the bottom to pick them off and move left to avoid their shots. The third armada will also enter from the bottom, but they soon curve out to the left. Place Gyruss in the lower left corner to destroy them. The final group will also enter from the bottom. So position Gyruss at this location to pick them off.

Jupiter's chance stage requires you to reposition Gyruss several times. Start by placing your ship in the 8 o'clock position and destroy the first 5 craft that enter. Then dip down to the lower left corner to eliminate the rest. The next group will also appear in two parts. The first half can be hit in the upper left corner, while the remaining ships can be blown away in the lower right. The last two fleets are the same as the first two, only in reverse. Place Gyruss at 10 o'clock on the screen to destroy the first part, then move to the upper left to get the rest. The fourth formation emerges in the lower left and then the upper right sections of the screen.

Mars

The ships attacking you on the warps to Mars enter from the center of the board similar to Jupiter. These fighters are very fast, though, and unload their bullets in a wider spray. Move to the top to get the first set, then go to the bottom and shoot at the second one. The third group emerges from the bottom, then flies to the right, while the final set of attackers appears from the right and moves to the top. Try to get ahead of the Ideoclan ships and fire once they get on the screen. Move in the direction they're going and fire as you go.

The chance stage on Mars is very easy. Fly to the right to pick off the targets as they cross over each other. Then move to the top to get the second set of ships. Next, glide Gyruss to the left, and, after destroying these ships, fly to the bottom and fire on the last set to end the stage.

Earth

Earth is the roughest of all the boards. Everything is sped up to the highest difficulty, and, because it is so hard to hit the ships as they appear, you must battle the aliens longer.

The first two groups of ships can be had by guiding Gyruss to the lower left, or lower right corners. Fire as the enemy begins to attack, but quickly move to the top of the screen. Don't go all the way up, just high enough to avoid the ships which try and ram you. The third and fourth sets will come from the upper left and upper right corners. Treat them like the first two arrangements, fire when they appear, then fly down.

The final chance stage is the easiest of them all. Simply set in one place, fire at

one set, then move to the next. Start at the bottom, destroy the first group, then move clock-wise around the board, to the left, then the top, and then to the right to kill all the ships.

Beyond Earth

Once you defeat the Ideoclans at Earth, you must return to battle them at Neptune. Instead of two warps, Neptune will have three, with the first being

very fast (the same speed as the Earth stages). The second warp will decrease the speed once again, but the enemy ships will fire many more bombs, making it imperative to move out of the way sooner.

Beginning with stage 72 the speed and difficulty of play will decrease. The aliens will fire fewer bombs and fly slower. The speed increases again on stage 216, so be alert.

All in all, Gyruss is an excellent game, especially for Tempest and Galaga aficionados. In fact, it would be nice to see more of this type of game in the future.

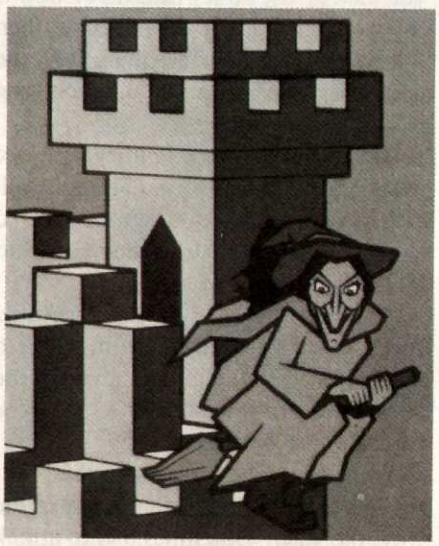
—CRYSTAL CASTLES—

Crystal Castles from Atari combines the play themes of several games while introducing a few of its own. You must pick up dots and clear mazes in a three-dimensional environment that's somewhat akin to Pac-Man and Congo Bongo.

The game places you in the role of Bentley Bear, on a voyage to pick up as many colored gems as possible. The stones cover the floor of a variety of three-dimensional castles which must be cleared via a trak-ball and jump button.

You must guide Bentley through 10 levels of progressively difficult screens. There are four different castles for every level, with the last board of each being the lair of Berthilda the witch. Each castle has its own layout and gem arrangement, as well as its own enemies which must be overcome.

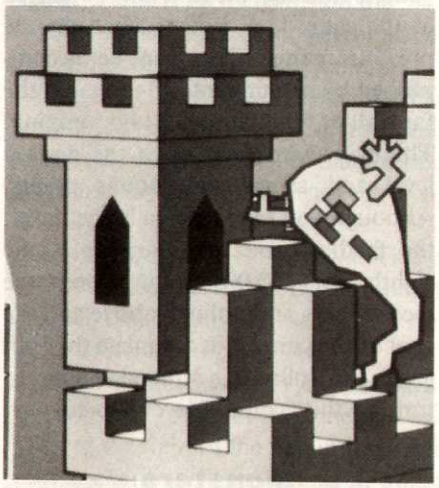
Threatening Bentley is a menagerie of characters, led by the evil broom-riding witch, Berthilda. Helping her are the gem-eaters, tall green cyclops which possess the ability to eat the precious stones Bentley must collect. Also thwarting your efforts is a 'Nasty Tree,' a large oak which can scoop up the gems as well as attack you. Other enemies include the horrendous bowling balls which try to crush Bentley, the bee swarm that attempts to sting him, and the playful ghost that always seems to get in the way.



Bentley has two offenses against the foes. He can jump the other creatures, stunning them in some cases, or he can overcome his enemies with a magic hat. The latter makes him invincible for several seconds before its power wears off.

Bentley must complete a maze by picking up all the gems on the board. Since some of the enemies also collect the crystals, it's possible for them to get the last stone. If they retrieve the final gem the round will end with no bonus, but when Bentley gets the last one a bonus will be awarded, in an amount determined by the current level you're presently on.

Besides the gems, you can score extra points in a variety of ways. One is to pick up a dripping honey pot for 1000. Not only will this give you points, it will prevent the bee swarm from attacking. Another method that will score additional points is destroying the gem-eaters. When one of the monsters is eating a gem, taking it from the ground to its mouth, it is vulnerable to attack.



Running Bentley across a gem-eater when it's in this state will eliminate it and award 500 points. A final way to get more points can be achieved on every fourth screen, when Berthilda's present. Grab the magic hat for 500 points, and, while still energized, run over the witch. This will stop Berthilda's threat and add 3,000 points to your score.

Secret Warps

Before discussing the playing aspects, something must be said about the game itself. Within Crystal Castles there are several 'secret warps,' places, where if the correct moves are made, Bentley will be transported to a higher level of play, and receive bonus points as well.

On the first screen of level one, run around the structure into the far corner. Once positioned there, jump and Bentley will be moved to level 3, with 140,000 points.

The second warp is located on screen one of level 3. Grab the hat in the upper-right corner and take an elevator to the top of the castle. Run down the hidden ramp until you reach the bottom. Then, with the hat still in place, jump and Bentley will be warped to level 5. This warp is somewhat difficult since you

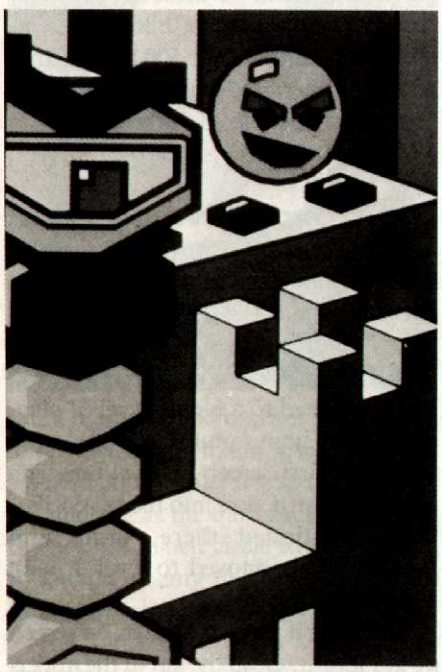
must accomplish a great deal within the limited time the hat lasts.

The final warp is located on the third screen of the fifth level. Here, merely run to the upper-left corner of the crossroads and jump. This will take Bentley to level 7 with 420,000 points.

Another feature of Crystal Castles is its continued play option. When one game is finished, the next may be started at the same level you reached on the previous game. This can be accomplished by running into the cave on the far wall of the first screen and jumping. This will warp Bentley to the desired level and award you bonus points. Although you may reach a higher level, the farthest you can warp to is the eighth, for 490,000 points. Since the secret warps are outlined above and the goal of the game is to complete the 10th level, the following strategies concentrate on the castles of level 7 to 10.

Monsters

Each of the different creatures has its own abilities and methods for doing you in. Although they shouldn't pose a



danger, in most cases, it's helpful to know how to avoid them if need be.

The gem-eaters travel in semi-random paths, devouring the crystals as they move. The gem-eaters become a threat near the end of a round, the longer they go without eating gems, the faster they become. If you jump a gem-eater, or if one happens onto a gem, it will be effectively slowed down for several seconds. Even though they can be killed by running over them while they're eating, this shouldn't be attempted.

Trees are probably the greatest hazard in Crystal Castles. They're very smart and track Bentley's every move. When one begins chasing you the only way to get away is to position yourself where the tree cannot move (around corners and such.) The trees, like the gem-eaters, can be stunned by jumping them. They don't, however, stay stunned for long.

Bees are almost identical to the trees in that they track you wherever you go. Unlike trees, however, the bee swarm cannot be stunned. The frequency that the bees arrive depends upon whether you pick up the honey pot. If you don't, the swarm will come down, leave, then return. If you do retrieve the honey, the bees will cease unless you take too long to finish the board.

Bowling balls track Bentley, but not as successfully as the trees. The balls will pick up speed then shoot right at you. To avoid them, move out of their path and let them go by.

The ghost, which jitters back and forth, moves in a random path, trying to block your way. To get around the ghost, wait for it to move away, but be careful of other monsters.

Your last enemy is Berthilda. Although she normally will not get in the way, the witch sometimes trys to attack you. Berthilda will move in erratic patterns, shooting from one place, turning, then proceeding to the next location. As long as you stay away from her, Berthilda won't pose any threat. If she does get near, jump her then move away.

The patterns described below aren't foolproof, but they do provide a good path to clearing each board. If followed properly, you should be able to finish the game in no time.

Level 7, Screen One, The Gems: Start by clearing the square of gems directly in front of Bentley. It's imperative that these be picked up or else it will be much harder to finish the round. Next, move to the left and get the hat, clear the second square of gems to the left while the hat is on and then proceed up the stairs to the middle platforms. Run left and pick up the 6 gems at the dead end, then roll the trak-ball quickly to the right to pick up the gems at the other dead end. After that, wait for an opening and get on either one of the elevators going up. Make sure there are no gems remaining on the lower levels before grabbing the last ones on top to end the screen.

Screen 2, Pyramid: Start by clearing off all the gems to the left of Bentley Bear, then hop on the elevator that leads

to the top left plateau and grab the jewels there. Next, run down the walkway that goes behind the wall. You must now maneuver Bentley to the top corner of the screen to get the honey. Move to the right, go down the short elevators, and pick up the last gems.

Screen 3, Hidden Spiral: Once this castle starts, wait for the gem eaters in the top right corner to eat a few stones then jump them. One will be coming toward you, while the other will be going up the walkway to the left. Run to the top corner then move back to get the honey pot. After that, start down the hidden spiral and grab the magic hat at the foot of the staircase. Clear off the letters BBM then pass the bowling ball (he'll be struck in the letter S) and clear the letters on top.

Screen 4, Berthilda's Dungeon: Begin by clearing the group of dots directly in front of Bentley. Next, jump down the

aisle that all of the Gem-Eaters are on and grab the hat. With the hat, run to the top of the castle and, after the swarm of bees has left, grab the honey. Next go up the elevator to the top ledge and grab the second hat. Kill Berthilda and clear off the rest of the dots before descending. Return to the bottom of the screen and pick up the last gems.

Level 8, Screen 1, The Gems: This board is identical to the one on level 7. Use the same system to finish it.

Screen 2, Crossmaze: Immediately run Bentley to the top of the screen. Wait by the elevator that leads to the honey, but off to one side, so the bees don't come down. When the bees do appear, wait for the elevator to go up and come down twice before getting on. Once on the platform, clear the dots and grab the honey, then descend to the second level. After getting off the elevator, pick up the gems on the middle floor and run to the bottom level. Quickly clear the gems in the crossmaze to finish it.

Screen 3, Hidden Ramp: Once this round starts, run quickly to the left and get on the *up* elevator. If you miss it, walk Bentley a little forward until it comes down again. Once on top, run up the stairway to the top of the screen and clear off the dots. After that, run down the stairs to the right and grab the gems on that plateau. Following that, run to the center and clear off that block of gems. Pick up any rocks left and descend the elevator closest to your hat. While energized, grab any other gems to complete the castle.

Screen Four, Bethilda's Fortress: Begin by immediately running Bentley to the elevator and clear the top level of gems. Wait in the center of the plateau for Berthilda to come from behind the wall. When she does, dash around the back and get the one gem in the corner. Again, wait for the witch to get out of your way before descending the elevator. Once on the main floor, hurry and run around the open ground. When the tree begins to follow, jump him if necessary, and grab the hat. Quickly collect the remaining gems before your power wears off.

Level 9, Screen 1, Impossible Staircase: Contrary to what the game says, this board isn't impossible. When it starts, run to the back and get the honey pot before the bees come. Go back down the stairs to clear the open field of dots while the monsters are stuck on the staircase. After all the gems in the open area are gone (make sure, some can't be seen in the right corner because there will be monsters in the way) go up the stairs that the honey pot was on and pick up the gems at the dead end. Next, return down the stairs and jump the trees. Run around the castle and jump any Gem-Eaters that get in your way. Get the dots at the top of the screen, then come down the staircase and pick up any gems left at the bottom.

Screen 2, Nasty Tree: At the beginning of this board grab a few dots then jump into the pack of monsters to get the magic hat (if you fail to do so it will turn into a bowling ball after several seconds.) After that, run across the screen and pick up the honey pot. Ascend the stairs behind the pot then go to the right. (The tree will usually be on your tail, so get him before your hat wears out.) Clear off the dots from the middle walkways and get on an elevator that will take you to the top section. Grab everything on top and then go back down to the right to get the remaining gems.

Screen 3, Hidden Spiral: Although this board is in level 7, you'll realize the absence of the walkway connecting the top corner to the honey pot. A new strategy is used to overcome this alteration.

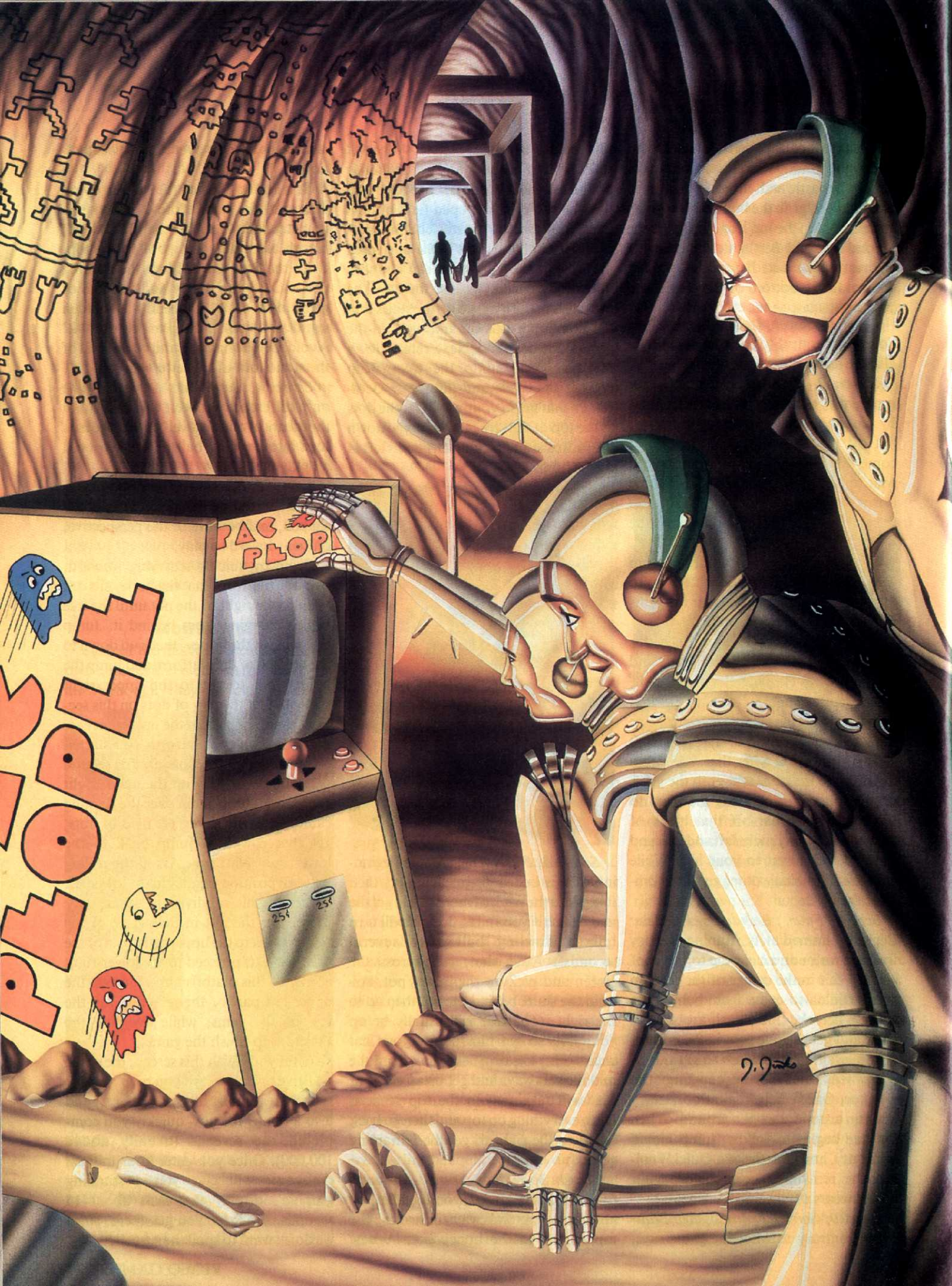
Run to the foot of the hidden spiral and grab the hat before it becomes a bowling ball. Clear off the 'B' and 'M' before ascending the spiral to the top. Once the bees leave, jump the flaming pot and get the honey and the line of gems next to it. Descend the hidden spiral and pick up the gems on the 'M.' Avoid the bowling ball and get the rest of the stones out of the letters on top.

Screen 4, Berthilda's Dungeon: The only difference between this castle and the identical one on level 7 is that the hats turn into bowling balls if not retrieved quickly.

Level 10, Screen 1, The End: This is the last screen of the game. It is oddly shaped, and because of the perspective, quite awkward to play.

Begin by quickly scurrying forward, over the platform that the honey sits on. Wait to the right of the pot until the tree begins charging from behind it. Jump the tree, get the honey, then run down to the bottom of the platform and jump the boiling pot to get to the upper right plateau. Get the row of dots on this section, then jump from the upper left corner to get on the platform you started on. Pick up all the dots on this section then situate Bentley on the upper right corner and jump again over the flaming cauldron to the lower left field of dots. get that row then jump back to the lower-right platform. Avoid the rolling ball and position Bentley in the lower left corner of this subdivision. Jump once more over the pot in the center of the screen to get to the upper right part of the board. Next, proceed to the lower-right corner of this platofrm and jump to the upper-left part of the screen. Grab the rest of the gems, while avoiding the skeleton, to finish the game.

After you finish this screen, the game will give up and award you bonus points for any remaining men (10,000 per) and also a bonus for how quickly you completed the screens (usually above 100,000). Once you enter your initials, the game will give you a stunning graphic's display that lasts about 15 seconds. We'll let you get there, since we don't want to spoil the surprise. ▲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THE BIRTH OF A NOTION

Discovering the True Beginnings of Video Games

by Frank Lovece

History is a series of conflicts whose biased documentation is transcribed by the victors. Up until recently, Atari had emerged as the dominant power of the industry, a sort of Roman Empire of video games. Therefore, it's no wonder that its founder, Nolan Bushnell was generally credited with having invented video games or being "the father of video games."

Most video game historians and observers today credit Nolan with inventing Pong in 1972, but note that Steve Russell at MIT created the first video game, Spacewar, in 1952 and that Ralph Baer and his team at Sanders Associates invented home video games in 1966.

Now with the vast empire of Atari in a state of decline and its powers diluted, it's no wonder the revisionists are busy rewriting these once undisputed notions. The latest version, pieced together, through new interviews and the recently uncovered transcripts, depositions and decisions of two landmark trials says: Ralph Baer and his associates did indeed create home video games—and even indirectly, Pong. Nolan Bushnell neither originated the idea of video ping-pong nor engineered the physical product of Pong. (He was, rather, the major inventor of the first coin-op computer game, Computer Space, in 1971.) Also, Steve Russell did *not* invent video games. That pioneer is 73-year-old Willy Higinbotham, a nuclear engineer who had high school students playing video tennis in 1958.

The early history of video games is a story of corporate coups, lawsuits, maverick inventors and a mythic figure whose legendary status has become larger than life.

As with so many other American landmark inventions, the early history of video games is a story of corporate coups, lawsuits, maverick inventors and a mythic figure whose legendary status has become larger than life. That figure—Bushnell, of course—has been credited with the creation of video games so often that now he laughs about it, and claims it's the result of his access to the media. He now generously turns the spotlight on Ralph Baer. However, the long ignored Baer now dismisses the early pioneers. It's hard to dispute a man (Baer) who helped develop radar and the atomic bomb before turning to video games.

The chronology of video games generally begins with Spacewar. Reportedly, but debatably, the brainchild of a college student named Steve Russell, Spacewar emerged at MIT in early 1962, on an $88 \times 69 \times 26$ inch PDP-1 computer costing about $120,000. Similar to the much-later Asteroids coin-op sensation, Spacewar was a duel of two missile-spewing spaceships, with a background of decorative stars and a sun with a heavy gravitational pull. By most accounts, Russell's star configurations were eventually reworked by fellow MIT student Peter Samson into authentic constellations' the calculations for the sun's gravity were the product of Dan Edwards; a now-familiar "hyperspace" function—where a press of a "panic button" blips your spaceship to another, random spot on the screen—was devised by J.M. Graetz. Soon through computer networks all over the country, Spacewar became an underground hit among student programmers who continued to modify regional versions. Among those students, in 1965, was one Nolan Bushnell.

The remainder of the early history is well-documented but severely incomplete until now. In late August 1966, while waiting for a bus in New York City, Ralph Baer matter-of-factly decided to invent home video games. Like Higinbotham, of whom he never heard, Baer is a salaried seeker, in his case, the chief engineer and manager of the Equipment Design Division of Sanders Associates, a New Hampshire

Illustration by John Jinks

manufacturer of military equipment. His main associates in the creation and patenting of the first home video game were William L. Harrison and William T. Rusch.

Where this great idea came from, is an unsolved mystery, but video games already existed when Russell, Baer, Bushnell and others had inspirations. Among academia, at least, the idea was in the wind. From an oscilloscope screen in October, 1958, came a faint light that foretold the future.

At the Brookhaven National Laboratory (a government nuclear research facility) which was noted for its open houses 25 years ago, high school, college students and even the general public forgot their nuclear jitters and played tennis on a five-inch-diameter oscilloscope screen. While Nolan Bushnell was still in high school, Brookhaven's Willy Higinbotham invented video games.

"The exhibits were always pretty static," recalls the still-active physicist. "We wanted to have something people could interact with." Sometime earlier, he'd started tinkering with an analog computer that was even then becoming obsolete, and he thought about something called "cartesian coordinate displays"—a kind of graph just right for illustrating the paths of bouncing balls. "The instruction book that came with the computer described how to plot trajectories and bouncing shapes, for research," remembers Higinbotham. "I thought, 'Hell, this would make a good game.' " (Working with colleague Dave Potter.) "It took me four hours to design one and a technician a couple of weeks to put it together."

The simple, side-view tennis court consisted of a long horizontal line with a short "net" in the middle. A "ball" bounced back and forth. Two players each used a box with a button and a knob to choose the moment and angle, respectively, of their returns. The game was a hit at the open houses, and Higinbotham showed it again the next year on a 15-inch screen.

Higinbotham never patented his invention, however. What some might consider an incredible oversight, wasn't naivete on his part. The man was a Williams and Cornell educated physicist who, from January, 1941 to December, 1943, helped develop radar at the MIT Radiation Laboratory. His career then took him to the infamous Manhattan Project, where, as head of the Electronics Division, Higinbotham devised the final detonation electronics of the first atomic bombs (and, incidentally, has since lobbied passionately for non-proliferation). The portrait painted is of a man who has always known the business of science and the marketing of it. He knew in fact, that you can't get a patent on something the patent office considers "obvious." To the lifelong scientist, his video tennis game was just that. "Even if I had patented it," he reflects, "the game would've belonged to the government."

Despite his amiable anonymity and the press' near-total ignorance of him, Higinbotham is well-known indeed among the litigants in the many video game-related lawsuits. "From time to

Many consider Nolan Bushnell to be "the father of video games."

time," he says wryly, "lawyers call me up to say, 'Hey, we want an affidavit.' " He supplies them and depositions as well, taking in the process, the head spot at the video game table.

Spacewar emerged not long after. Higinbotham's tennis game, and even later, the Baer/Rusch/Harrison team's efforts would soon bear fruit. At this time, a young Nolan Bushnell was growing up. Born in Clearfield, Utah on February 5, 1943, Bushnell made a habit of curiosity. He tinkered with things electrical and became one of the youngest people to receive a ham-radio license. During his high school years, he did TV repair work part-time at a place called Barlow Furniture, an RCA dealership. "We didn't like the Magnavox guy down the street," he would quip, years later, in a district court where Magnavox and Sanders were suing to uphold the Baer group's patents.

Sometime around 1963, while at Utah State University as an engineering student, Bushnell began his long association with the amusement industry somewhat ingloriously. At a Salt Lake City amusement park owned by the Lagoon Corporation, Bushnell debuted as a pitchman for Spill-the-Milk and other typical carnival games. Eventually, he was promoted to operator and repairman of the bowling and baseball games, and other such mechanical coin-op cousins to pinball machines.

He had meanwhile taken to business like a duck to water. Bushnell would buy used coin-op games for five or ten dollars, fix them up and install the machines in fraternity houses, splitting the take with the different houses. When it was eventually time to move on, he sold his route for a handsome sum.

In 1965, Bushnell transferred to the University of Utah, where a chess club friend introduced him to Spacewar. Until the university eventually clamped down on the use of its million-dollar plus computer for playing games, Bushnell played Spacewar occasionally and even modified the University of Utah version. "I wanted to make a change to make the rocket ships move faster. I thought the game was too slow the way it was." At the end of 1968, he graduated with a bachelor of science degree in electrical engineering with an emphasis on computer design, and went to work as an engineer for Ampex in Sunnyvale, California.

RCA, the electronics giant, had meanwhile developed its own little-known video game. Demonstrated at the silver anniversary celebration of the RCA Labs at the David Sarnoff Research Center in Princeton, NJ, this was a computer-generated game of pool. The RCA engineers used a Spectra 70/25 costing about $90,000. There was also a custom-made interface device linking the computer and the screen, which, like most computer screens, was a vector display rather than the conventional raster-scan display of TV sets. The game was relatively crude; there wasn't even a cue-stick symbol, an appalling omission considering all the money and time poured into it. RCA claimed they didn't envision any commercial possibilities for their game.

Concurrently, as is well-known, the Sanders group, led by Ralph Baer, showed its tennis video game prototype

to the New York City cable company, Teleprompter. Plans for cable-delivered video games fell through, however, and between December, 1968, and early 1971, Sanders demonstrated its invention to RCA, of all people, as well as Zenith, General Electric, Motorola, Warwick Electronics and, among others, Magnavox, who would eventually turn the prototype into the first Odyssey game-console.

After two years at Ampex, Bushnell and another employee there, S. Fred (Ted) Dabney, formed the Syzygy Company, which would eventually become Atari. Bushnell had also, by this time, joined amusement-machine maker Nutting Associates as chief engineer.

In the early part of 1971, he began rough design work on a coin-op video game based on Spacewar with Dabney and a software person named Larry Bryan, who eventually left the enterprise. The game renamed, Computer Space, was engineered by Syzygy and leased from that company to Nutting, who distributed it in late '71 and early '72.

About the same time, Bushnell put together a simple design on paper for a computer-game system involving six monitors hooked up to a central unit and showed it to the Lagoon Corporation. The idea was an outgrowth of a student paper he'd written during his senior year at college. It was a longshot and nothing came of it, but the scheme offers a glimpse of Bushnell's early creativeness.

At this point, a most unlikely convergence of Baer's and Bushnell's lives occurs. The complete implications would only start to become clear five years later, at the conclusion of *The Magnavox Company, et al. v. Chicago Dynamic Industries, et al.*—and would come more sharply into focus more than five years hence, at the conclusion of *The Magnavox Company, et al. v. Mattel, Inc., et al.*

On January 27, 1972, Magnavox, under license from Sanders, began producing a video game console called the Magnavox Odyssey 100 (model ITL 200). Soon afterward, the company began a national tour to demonstrate the game to Magnavox dealers and distributors and other interested parties. The tour began in Phoenix, Arizona on May 3. On May 23-25, the Odyssey tour stopped at Burlingame, California, near San Francisco. On May 24, Nutting chief engineer Nolan Bushnell was present. He witnessed a demonstration of Odyssey's ping-pong game, and played it. "[Nutting] had heard about the [Odyssey], that it was a video game and since we thought we were the only show in town, we thought we would like to see what was happening," Bushnell recalled for the Chicago Dynamic Industries case. He described the Odyssey game he played as consisting of a "light spot that moved back and forth when you hit it with the paddles." After playing that game and a handball game for about a half-hour, he reported to Nutting that the Odyssey was "a home unit, not very interesting to play, no competition." Ironically, a version of this "uninteresting" game would soon help secure his fortune.

Ralph Baer is known as the creator of home video games.

Following a major disagreement with Nutting he resigned. Bushnell and Syzygy/Atari hired away Ampex engineer Allen Alcorn. The first day he came to work, in the spring of 1972, Alcorn was given the assignment of designing a simulated tennis game. The game was completed by June 27—just a month after Bushnell saw the Odyssey ping-pong game. "I wanted two men," Bushnell recalled, "two little men with rackets to move around the play field controlled by a joystick with a button on top and when the button was pushed, the little racket in the man's hand" would make a striking motion. The market version only consisted, of course, of paddles, ball and net, like the Odyssey.

Pong was never intended to be a marketed item." Bushnell asserts today, "but a training item for Al." I felt that in order to bring Alcorn up on the technology, it would take a practice project. But halfway through, we found the game so much fun we decided to market it." Alcorn's recollection is that, "Nolan told me it was a consumer product—a throwaway. My goal was to keep it as small and economical as possible. I couldn't design it cheaply enough, though, so we decided to make it a coin-op." Bushnell's company had a contract with Bally, the arcade-game maker, to design coin-op games, so Bushnell made his fabled trip to Bally's offices, where Pong was turned down.

Pong essentially looked like the Odyssey game, played like the Odyssey game and sounded like the Odyssey game. Bushnell and Alcorn had conferred on many salient points, but it was Alcorn who physically put Pong together. As far as the origin of the idea for Pong, District Judge John F. Grady of the US Northern District of Illinois, in *Magnavox v. Chicago Dynamic Industries,* would state that, "There is no real evidence which I find persuasive that Mr. Bushnell had conceived of anything like the Pong game prior to the time that he saw the Odyssey game. When he did see the Odyssey game, what he did basically was to copy it."

Bushnell, today, does not consider his act copying. "I didn't see how anyone could patent a ping-pong game. My attitude is simply that you can build anything you want unless someone specifically tells you not to build it." Atari, in fact, filed a suit against Magnavox and Sanders, a patent declaratory judgment action including a patent infringement counter-claim. The Sanders patents have always been upheld and would certainly have been upheld here. Yet, according to Starpath's Bob Brown, formerly one of the R&D heads at Atari and one of the driving forces behind the home version of Pong, "Atari felt we could win. We ended up settling on paying royalties for a year and after that Magnavox would go after the competition, so our competitors would always be in litigation."

Is there more to add to the early history? Perhaps. Just as real-life Indiana Joneses constantly root out new clues to the fall of Rome and the ways of China's dynasties, the keepers of 20th-Century culture constantly unearth their own kinds of artifacts. Defining even the relatively recent record of video game history takes time. ROM, after all, wasn't built in a day. ▲

HARD SELL

Commodore 64: A Computer To Grow With

By Mark Brownstein

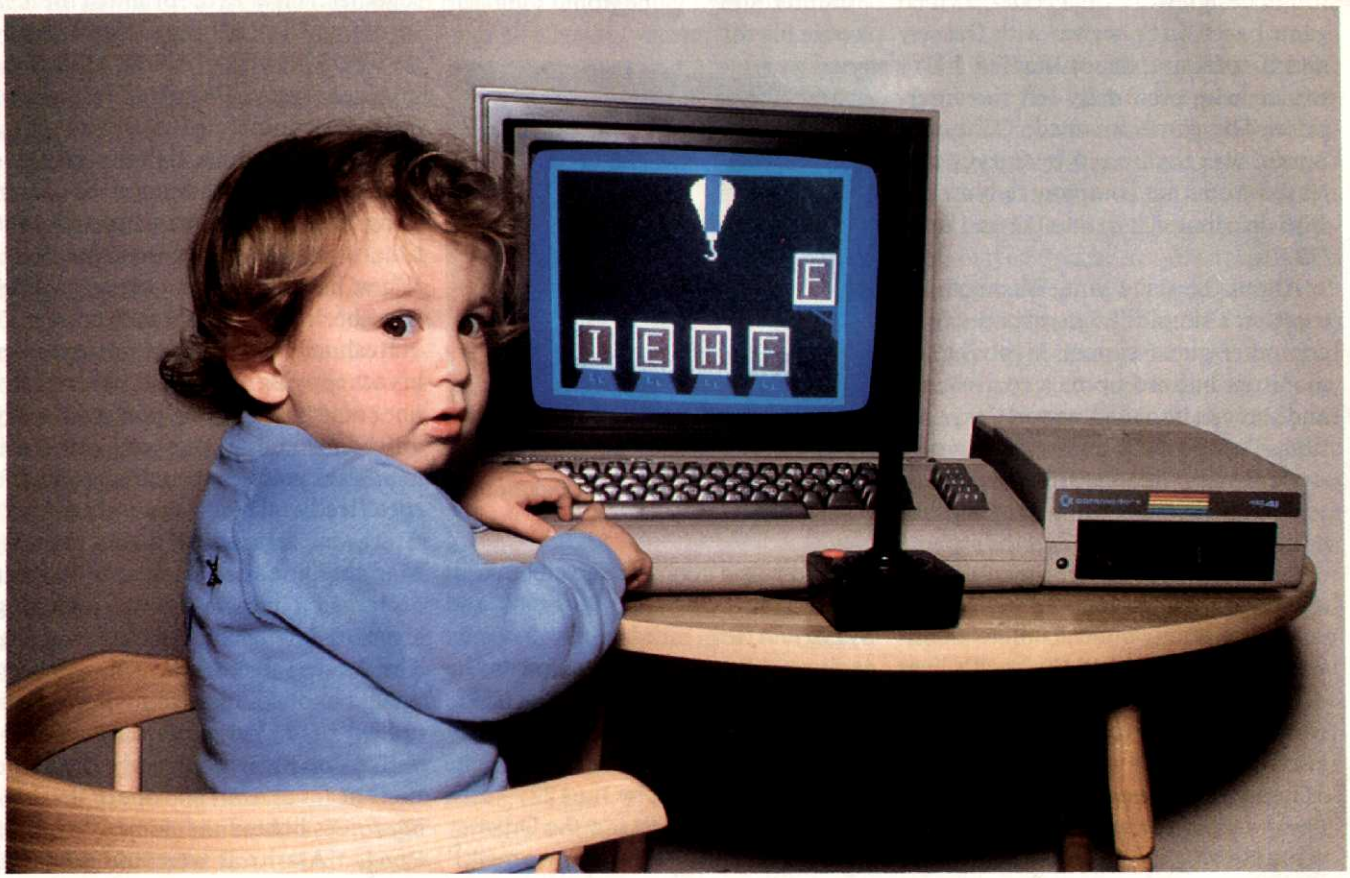


Photo by Perry Greenberg

Although the Commodore 64 computer has been on store shelves for less than a year, it has demonstrated a tremendous impact on the home computer industry. Introduced at a time when bytes for the buck was a major selling point, the $599 computer made most other computers on the market look anemic by comparison.

At its original price, it looked like a bargain: It had 64K RAM; the Apple IIe had 64K and carried a suggested price of $1395; the IBM PC, also with 64K listed for $1355; the Atari 800 was boosted to 48K and sold for around $600 and the TRS-80 model III with only 16K brought $999. Soon after the introduction of the 64, Atari introduced the 1200XL, with 64K for around $800.

But even at $600, on a memory only basis, the 64 was a bargain. But at Commodore one thing is usually certain: List prices don't stay up very long. Within a few months of its introduction, the price dropped about a third, to around $400. Soon after, the 64 dropped again to around $350, with a $100 rebate offered if you sent in an unwanted video game. Finally, the price seemed to level out at around $200.

At about the same price as an Atari 5200 game player, or a ColecoVision, you could buy the 64. But what can it do and how good is it? Let's take a step by step look at the 64.

At first glance, the 64 shows a tremendous similarity to its older (and smaller) brother, the VIC-20. Cosmetically, the 64 is designed in beige tones, with a beige

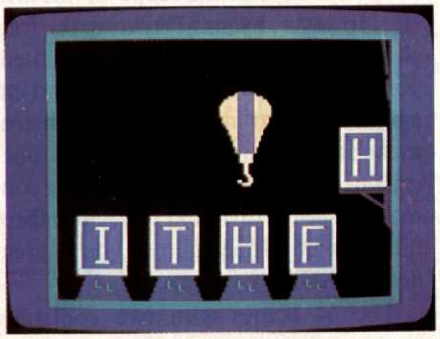
housing, dark brown keys, with function keys in a brown shade somewhere in between the two. The keyboard is full-sized, full stroke, with true typewriter feel; the graphic character set is the same as that of the VIC-20, and, in fact, if you have learned computing on a VIC-20, the 64 becomes a very easy move up.

Basic control words are the same in both machines—if you know how to program on the 20, the 64 shouldn't be a major problem, although there *are* major differences between the two. First, since the 64 has about ten times the usable memory of the VIC-20 (38,911 usable bytes), peeks and pokes to memory addresses are different on the 64. Second, screen characteristics are different—the 64 has much higher graphic resolution (320 x 200), displaying a 25 lines of 40 column text. In some cases, this text display may be almost too much for some TV sets or monitors to handle, creating somewhat indistinct letters and numbers (is it an 0 or an 8?).

The Commodore 64 has enough memory to handle many of the small business and personal growth packages available. With the addition of a disk drive (about $300), you can probably run a business or completely manage a very complex household using the 64. The 64K, non-expandable memory is a lot more than many competing computers, but even that amount can be quite limiting if you are trying to keep track of thousands of different items. Still, for many personal uses the 64 is very capable.

With all its power, however, it seems somewhat surprising that more business and home utilities programs haven't yet been developed. With the large number of 64 owners, and a growing level of expectation (now that I've got the computer, what do I do with it?), there should be some very good packages available soon. With the addition of a CP/M translator (available from third party developers, soon available from Commodore), the owner of the 64 can take advantage of the thousands of programs available in this major language.

Also somewhat surprising is the lack of really good, easy beginner's programming books. If you plan to get a 64 to learn programming, you could do much worse. Using a rather forgiving version of Basic (spacing between statements is more flexible than many others), easy editing, and pretty good keyboard make programming on the 64 fairly easy to learn. There are a few minor problems with the keyboard. If you are a touch typist, you have to learn new locations of certain keys (the " key is a capital 2, the parentheses are off by one number; a capital 8 is an open parenthesis on the



Learning with Leeper.

64, this figure usually requires a capital 9, and other keys have been relocated), but as long as you remember the changes, you should have few problems. Audible feedback, letting you know when the key you touched actually *registered* in the 64 would have been nice. The major problem I have had with the keyboard is the location of the ins/del (insert/delete) key and the clr/home (clear/home) keys. When you are writing a program, or copying from a book, and make an error, the easiest way to fix it is to hit the ins/del key, which erases the error and takes the cursor back to the spot where the mistake was made. This key is at the top right corner of the keyboard. Immediately left of that key is clr/home, which returns the cursor to the top of the screen. If you hit clr/home when you actually try to delete one space, you stand the risk of typing over already input data, changing program statements, or otherwise messing up work which you already have input. A return to last typed space could conceivably be built into the machine to undo this easily made error.

The 64 will accommodate a full range of peripherals, from many different manufacturers. If you have a 64, you should probably consider purchasing a disk drive, since most good programs are available on that format. Alternatively, many of the better programs are also on tape, for playback through your datasette (about $70). In order to be able to do much of anything with the 64, either the datasette or the disk drive are pretty much required (if you can't save or play back laboriously written or stored programs, you will be losing a *lot* of time). Ideally, you should be using both, so that you can handle software in either format.

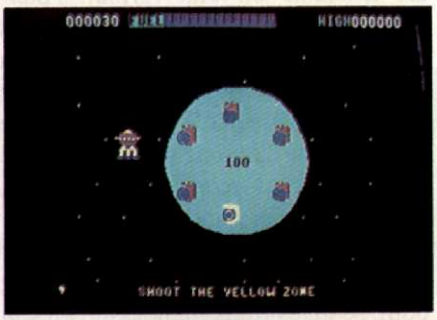
With its rapid access, the intelligent disk drive (intelligent because it doesn't use any of the 64's memory to operate, unlike Atari and some other systems) is a superior data handling device. The datasette works very well, but is much slower. For example, the game Neutral Zone takes about 80 seconds to load using the disk drive. The same game, ac-

Arcade adaptations and original titles highlight Commodore's software offerings.

cording to its designers, will take 9 minutes to load in cassette form. One error in the thousand of bits on the tape, and you will have to attempt another 9 minute reload.

Also available are a variety of modems, which allow you to communicate with information services or other computers, printers (which obviously print), and a CP/M device which gives access to the thousands of primarily business oriented programs writer in CP/M.

While the 64 is a good small office/home computer, it excels at games. With high resolution graphics, the sixteen color palette, the ability to handle 8



Lazarian.

sprites, and the excellent sound generators, it ranks right up there with the best game playing computers. Only the Atari has higher resolution and more colors than the 64, although it has lower sprite handling ability and offers less control over sound.

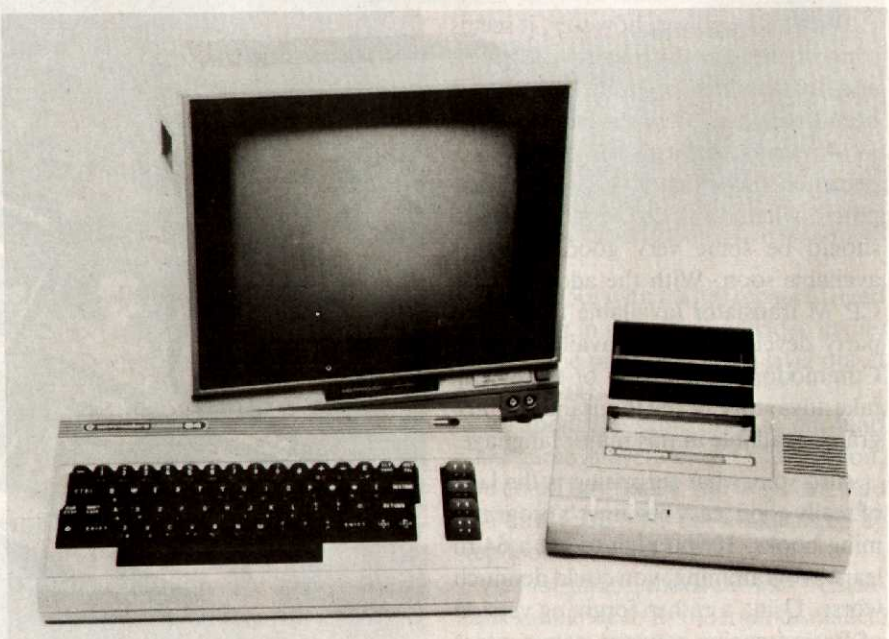
In case the term "sprite" is unfamiliar, it may help that Atari refers to Player/Missile in the same context that many designers use for the word sprite. A sprite is the object which is moved on the screen. In many games, it is, indeed, a missile or the missile's launcher. It is also the invaders who are the targets of the missiles, the aliens who are shooting the missiles and the shots they take, or even the bouncing ball in Q*bert. Systems having the ability to manage a greater number of sprites improves the overall complexity of games which can be designed for them. The Commodore 64 has the ability to play some very good games.

Above and beyond sprite handling and graphic resolution, which give the Commodore good game play potential, the large memory allows for nicely detailed playfield, and the SID (Sound Interface Device—after all, what would Sound Interface Chip have sounded like?) chip provides unprecedented game sounds. The SID sound chip provides three fully addressable voices. What this means is that the designer (you) has extensive control of the sounds generated, allowing you access to what is called an ADSR envelope for each sound. What the ADSR (Attack/Decay/Sustain/Release) envelope does for you is beyond the scope of this article. However, by manipulating the four characteristics of the sounds generated, you can synthesize almost any sound imaginable, from many musical instruments, to explosions, to imaginary tones existing only in your mind. Having control over three different tones and three different envelopes allows you a great deal of auditory variety.

The 64 comes with two controller ports, and gives you a choice of video outputs—to a monitor through its special DIN connector, or directly to a TV set by means of its built-in RF modulator. Both features are advantages over the VIC-20, which required a sometimes noisy modulator, and only one controller jack.

As good as the 64 is at playing games, there are a few problems with the unit. The most major problem has come to be referred to as "sparkle"—an annoying flashing of lights on the screen. In most cases the sparkle is just a nuisance—in others, it is reported, the sparkle can actually cause a program to bomb. On numerous occasions, Commodore has claimed to fix this noise problem. If you plan to buy a 64, it would probably be a good idea to try your boxed machine at the store (a good test for sparkle is the options screen in Crossfire—on some units it sparkles like crazy, others are solid black). Another problem is shortage of good cartridge games. For the most part, games have been available primarily on disk, requiring purchase of a disk drive. Others are also available on cassette, a slow, but relatively efficient means of loading games. Only recently a handful of cartridge games have been released, with many more in development.

At $200, the 64 is an excellent machine, especially in relation to most other computer systems. Over the past year, the 64 pricing has forced a rethinking (and price reduction) among the other systems, with more increasingly powerful, low-price computers due to hit the store shelves. The $600 ADAM (with approximately the same memory available for true computing, a data storage device and letter quality printer), the around $600 IBM Peanut (reportedly having 64K and a disk drive), an Atari "package" with similar characteristics, and probably other "systems" vying for your dollar, will undoubtedly provide some stiff competition for the $200 64 (which may drop to, or below $125 before too long). If you choose to go with a 64, however, you still haven't made a bad choice—it's a strong, powerful, proven system, well supported by Commodore and many third party hardware and software firms, and one with much more support and enhancement on the way.



The Commodore 64 is a system for computer users of all ages.

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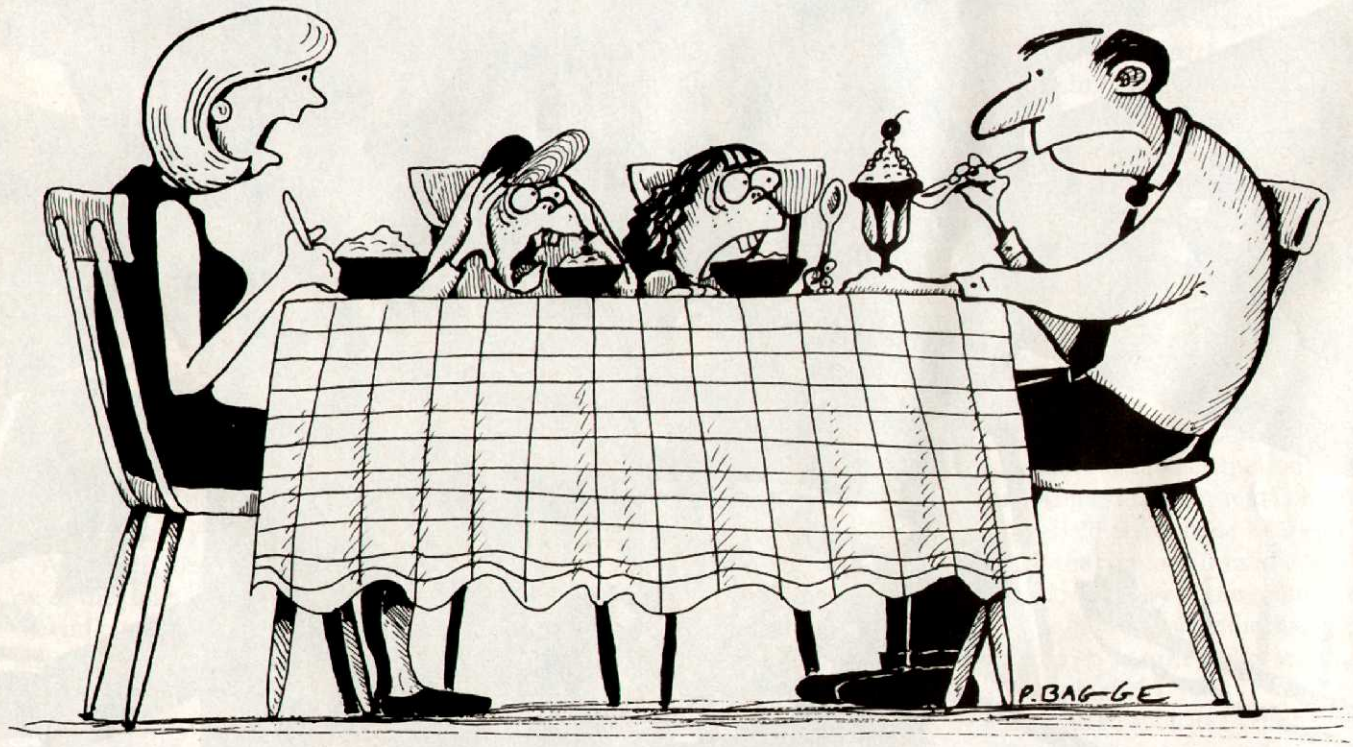


"They're afraid that if you eat the cherry that they'll turn blue and you'll start chasing them all over the room."

Blue Chip

HARRY WILLIAMS

Rememberances of a Coin-Op Legend

By Roger C. Sharpe

Almost every field has its legendary figures and cast of celebrities, but, in many ways, when it comes to video games things are a bit different. First and foremost is the fact that for those who have attained some measurable status, they have done so fairly recently. Even someone like Nolan Bushnell has only been in the public eye since the early Seventies. Designers of home or arcade games have risen in stature and recognition within the past few years. And, add in that new breed of video game, top score record holder, who may gain the limelight for a brief, shining hour, and you've pretty much covered the world of video.

The problem in doing this is that you miss a number of remarkable individuals who, if they hadn't chosen to dedicate their lives to games, wouldn't have set the stage for what we now enjoy. This is especially true when you look at the evolution and development of the coin-op industry.

Although video may be a phenomenon of the times, it owes its existence to the earliest days of the penny arcade and amusement games which were far more simplistic and rudimentary. But such mechanical marvels as mutoscopes, digger machines, strength testers, gun games and skee-ball, really set the foundation upon which a dynamic and exciting industry was born.

To fully appreciate just how far things have come, realize that arcade games didn't gain widespread prominence until the early 1930's when the nation was still feeling the effects of The Great Depression. Besides enjoying success at a time when almost everything else was failing, the fascinating fact about the new industry was that the people behind the scenes, creating the games and starting factories, were, by and large, in their Twenties.

Whether they shared common dreams or were looking for some stopgap endeavor to get involved with until times got better, what remains today is their immeasurable contributions to leisure time entertainment. Young men such as David Gottlieb (founder of D. Gottlieb & Company) and Ray Moloney, who started the Bally Manufacturing Corporation, helped to sustain the business through a variety of obstacles that could have halted day-to-day activities at any given time.

One of the most notable men who helped shape the world of coin-op amusements was Harry Williams. A commercial artist, who had also performed in a number of silent films as a bit player, Harry Williams would eventually have a profound impact on the arcade game business.

He initially began as a jobber/distributor of other people's machines but quickly turned to experimenting with his own game design ideas. Since simple pin games, made of wood, nails and a dash of paint as well as a small ball bearing or marble, were the main attraction of the day, it wasn't difficult for a man like Harry Williams to find ways to improve upon the basic concepts.

Even the passage of so many years can't diminish the magnitude of Harry Williams' accomplishments, especially if you consider what was then the state-of-the-art technology. Pin games were little mechanical machines with not much intricacy or variation in layout or play action. However, Harry was an innovative thinker and creative genius who was willing to go beyond the accepted boundaries.

His first effort was a game called Advance, and it proved to be a giant step forward in the art of pinball design. Although Advance didn't have any electrical features, Harry found ways to introduce more action and motion into the game. Arches at the top and bottom of the playfield were made of metal, rather than the commonly used wood, and the basic objective of the game was to maneuver balls through 'mechanical gates' and down into the higher scoring areas of the playfield.

When we talked about the game more than fifty years after it was created, Harry recalled that "the mechanical gates stopped the balls. Then, by putting another ball through a hole at the

Photos by James Hamilton from "Pinball!" by Roger C. Sharpe (E.P. Dutton)

top of the machine, the player was able to 'activate' the gate and cause it to rise which allowed the first ball to roll down into the high scoring area. It was the first game to actually help move the ball. I put it out on location in a drugstore and it did very well."

But the mechanical gates on Advance were delicately counter-balanced, making them vulnerable to jabs and nudges from players. Harry, however, had a solution. "One day in 1932," he once told me, "I went to the drugstore and saw a fellow hitting the bottom of the Advance machine to make the gates bounce up and let the balls go through without his having to aim. Well, this got me mad because they were cheating. So I took the game off location and hammered fine nails through the bottom of the machine. Anybody who tried to affect the play of the game by slapping the flat of his hand against the game's undersurface, would now think twice before trying it again."

Harry wasn't satisfied with the solution. He knew it was cruel and could only be temporary, so he went to work and developed a simple, effective device that stopped play if the machine was handled too roughly. Harry named the device "Stool Pigeon" and it consisted of a small ball balanced on a pedestal. If a player shook the game or pounded it, the ball fell from the pedestal and struck a metal ring, which immediately stopped play. The device worked, but Harry was in for a surprise when he watched one of the regular Advance players at the drugstore.

"Oh, look, I hit it and it TILTED," the player said. Well, upon hearing this, Harry quickly changed the name of his new device from Stool Pigeon to TILT! and that's how the word became part of the pinball language. And, a few years later, when electricity came to the games, Harry invented the "pendulum tilt," which can still be found on today's electronic pinball machines.

In terms of electricity and more sophisticated game play, Harry was instrumental in leading the industry into the future back in 1933. By this time, with a reputation already established as one of the premier designers in the field, Harry was a partner with another man in the running of Pacific Amusement Manufacturing, a company based in Los Angeles.

Even though it had only been a few years, Harry realized that new possibilities for all-mechanical pin games had just about been exhausted. He wanted something new and startling for his machines. And that's when he thought about the utilization of electricity.

Right next door to Harry's small factory was a company that manufactured "solenoids," devices that function like miniature electro-magnetic motors. With the advice from the men in the solenoid company, using batteries for power, Harry Williams designed the ancestor of the modern pinball kick-out hold. It was the first pin game feature that worked by non-mechanical means. The basic idea was simple: A steel ball falling into a scoring hole would be kicked out by an electricity powered peg when a second ball completed the power circuit by falling into a second hole. Harry installed the featured in a game called Contact.

His insight into the designs of machines were always a wonder that somehow allowed him to bridge the generations and stay current with whatever the prevailing trends might be.

The new machine caused a sensation on the West Coast, but Harry was only warming up. If color and motion made a pinball game more appealing to the public eye, then why not please another sense as well? It began as a practical joke on his partner when Harry found an electric doorbell and installed it in one of his Contact machines. Every time a ball bell into the 'contact' hole, it would ring the bell.

"We had a small showroom," he remembered, "where our operators could play Contact while they were waiting to pick up their machines and take them out on location. I hadn't told my partner about the new bell, so the next morning—whenever the bell rang in the showroom—my partner ran to pick up the telephone. After about the fourth time he told me he was going to call the phone company, because the phone was ringing but nobody was on the line when he picked up the receiver. Several of the operators playing Contact were in on the joke and finally gave it away by laughing. But one of the operators liked the bell so much he decided to take two Contact machines—one with a bell and one without. We put them side by side. They were identical to look at. But wouldn't you know it? The one with the bell took in double the money of the other."

It was that simple. Harry Williams had moved the pinball industry another giant step forward by introducing not only motion but also sound to what had been a soundless phenomenon. More games and deals followed for Harry as he began working with the major manufacturers of the time, including Bally and Gottlieb.

With a game called Multiple for Bally, Harry introduced the electric tilt mechanism, along with scoring holes which increased in value every time a ball dropped in. A mechanism behind each hole showed its current value. This development, in fact, became the forerunner of modern scoring drums which later gave way to digital displays. Even the concept of free plays on pinball machines was an innovation that Harry Williams had a direct hand in developing.

When I first met Harry Williams in 1975, at one of my first coin-op industry trade shows, he looked more like someone's kind, old grandfather rather than a still-active game designer who had helped found the company that bears his name—Williams Electronics. I had already heard of some of his legendary exploits in the industry, but it was only when we began talking that I totally grasped the full measure of his achievements.

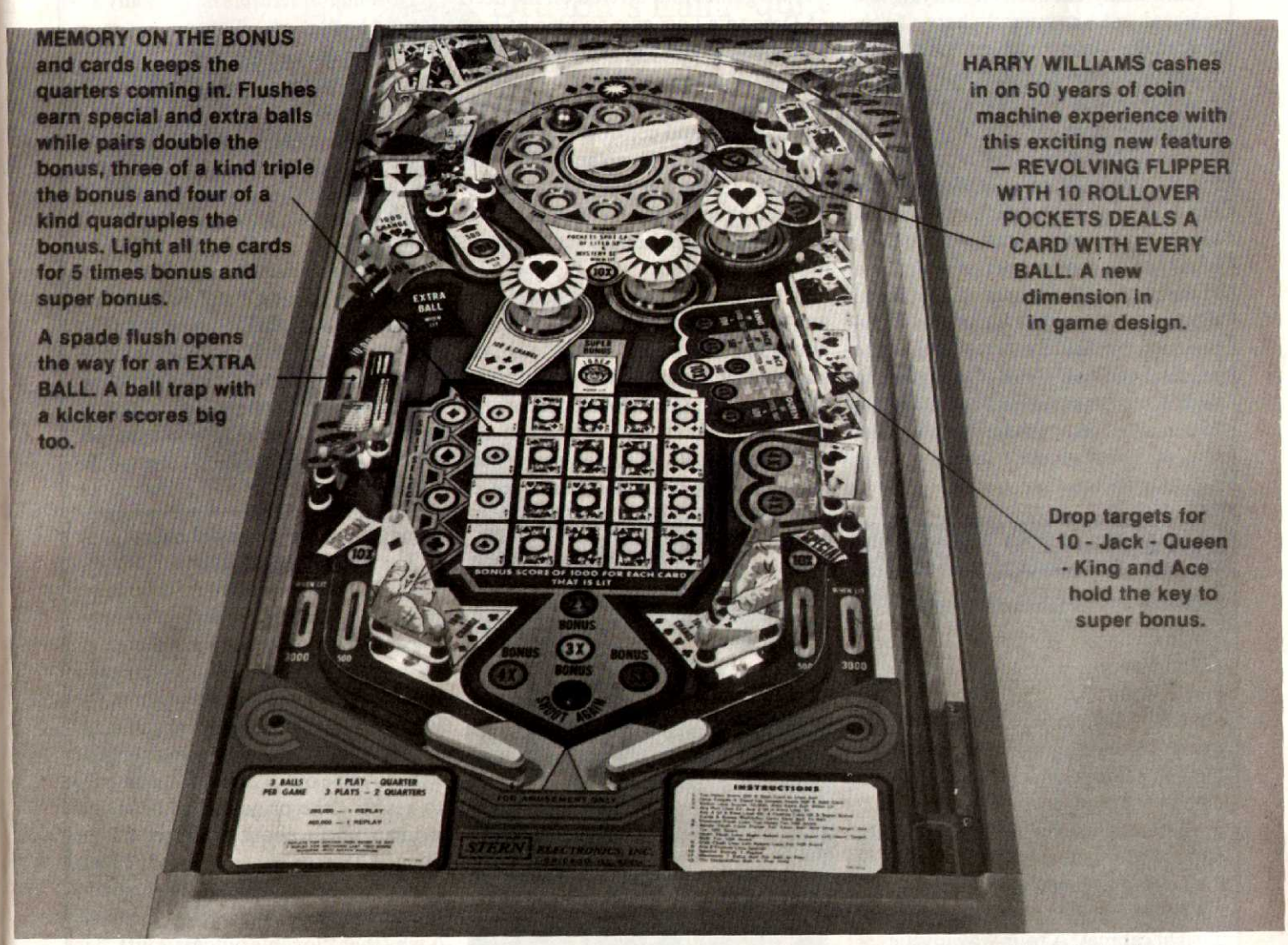
He was a remarkable man, a warm individual who became a dear friend over the ensuing years. There was a sense of vitality and youthful exhuberance about Harry when it came to games. He always wanted to give something back to the players whether it was incentives to keep on playing a particular machine or some design twist which made a game different and more exciting.

In his later years in the business,

Harry brought pinball players a number of very special games including such standouts as Flight 2000, Big Game, Free Fall and Cheetah. Whether it was a pin game, novelty attraction or some other arcade derivative, Harry Williams was in a class by himself professionally as well as personally.

What I remember most were those occasions when Harry and I would walk around the convention floor of a coin-op trade show and compare notes about all the different models on display. It would never fail to happen that Harry would see something, lead me over to it and then begin to recount how he had built something similar decades earlier and how happy he was that someone else was now trying the idea out again. His insight into the designs of machines were always a wonder that somehow allowed him to bridge the generations and stay current with whatever the prevailing trends might be.

On September 11th, at the age of 74, Harry Williams passed away. His impact on the evolution and scope of the arcade game industry is undeniable, spanning more than fifty years of development and change. As a dominant force in the business for so long, the coin-op world has suffered a tragic loss with his passing, as have game players the world over. For me, personally, any trade shows I attend in the future will be that much more empty because I won't have Harry to share the experience with. I've lost someone I felt very close to, who was a special person in my life. Harry Williams, for the rest of us, may be gone, but, hopefully, he will never be forgotten. ▲



Harry Williams was always willing to try something different and unusual when it came to game design. In 1979, after having moved over to Stern Electronics as a game consultant and designer to team up with long time friend, Sam Stern, Harry brought to life a novel idea on a game called Hot Hand. Incorporating a staple coin-op theme—cards—Harry placed a large, revolving flipper at the top of the board along with ten little pockets. A ball landing in this area would come to rest and score a given value before being 'swept' away to another part of the same section meaning more points. Although the machine wasn't a great success, the imaginative layout could not be ignored as yet another touch of Harry Williams.

COIN-OP SHOP

Paying the Price for Excellence

By John Holmstrom

As we go to press, the A.M.O.A. Show is only a few weeks away. Traditionally, the most electrifying new releases are showcased there, weeks before they arrive in arcades. A few of the best and the brightest have arrived early. They indicate a new direction and a new philosophy for video games.

The pinball / video games / amusements industry has always been known for delivering cheap thrills to customers. The new games, however, will help breakdown what we've come to expect as the norm with the increasing emphasis on more totally environmental experiences. As the technology behind the games becomes more sophisticated, we'll also see games that cost 50 cents, 75 cents, $1, $2, perhaps even $5. The result may be to more directly compete with movies than ever before.

Two games that arrived on the heels of Dragon's Lair give an idea of how and where design seems to be moving. Discs of Tron and M.A.C.H. 3 both offer enhanced special effects, stunning visual action and comfortable settings in which to play. The isolation that their cabinets afford not only increases the level of concentration for playing the game, they make the act a more sensual experience as well.

In the final analysis, game companies are finally making machines that are *worth* 50 cents to play. Operators have stated emphatically that prices must be increased for them to turn a profit. Players began to lose interest in the same old games and stayed away from them, forcing some arcades to lower prices in a desperate attempt to lure customers back.

Now manufacturers have finally answered both needs. Players want more thrills and unique challenges and seem willing to pay for them if they're worth it. Operators on the other hand, need more expensive games and new, exciting novelties to attract business. Well, these new games are worth traveling to the local arcade for, and worth paying 50 cents to play.

After a few years of stagnation, video games are coming back with a vengeance. the laserdisc games at the A.M.O.A. (which *Video Games* magazine will have a full report on next issue) will bring a lot of luster back to the arcade business, and people will see that they're *the* entertainment form of the future.

STERN'S CLIFF HANGER

Cliff Hanger is the first Dragon's Lair imitation to come out. It is so reminiscent of the world's *first* animated laserdisc game that you'd think someone read the script to Dragon's Lair, rewrote the action to update the story to modern-day times, produced the animation fast, and rushed it to the arcades to capitalize on Dirk the Daring's phenomenal success.

Cliff Hanger is housed in a standard upright cabinet. A four-way joystick is flanked by a pair of buttons on either side-one for feet, one for hands. You control the actions of the main character, Cliff, with the joystick and buttons. The hands button is moved when he is supposed to do something with his

hands, and the feet button does the same for when he is to move his legs. Often, you must press one of the action buttons and the joystick in combinations to make a successful move.

The scoring is similar to Dragon's Lair. Points are awarded for advancing past a sequence of events in the storyline. Most players will be more interested in getting through the story since few seem to be paying any attention to the high scores in these laserdisc games.

The story follows the adventures of "the lovable outcast, Cliff" as he tries to rescue "the princess", a beautiful woman who's about to marry Count Dragoe, "a man she can't stand!" That part of the story is explained to you in the attract mode. What's left in the air is why that "lovable outcast, Cliff," is running away from a casino with millions of dollars in hand (he either won it or stole it, you know how those lovable outcasts are).

At any rate, the story proceeds from there as Cliff avoids the Count's hench-

"...I like Cliff Hanger. It's a high quality game and answers the question, 'Is there life after Dragon's Lair?' quite convincingly..."

men and tries to survive the hundreds of deadly situations that he's thrust into. There are helicopters firing machine guns, men tossing grenades from speeding cars, traffic jams, car chases, and dozens of evil killers, all trying to put Cliff away. The story's climax takes place during the wedding scene, in the Count's castle, where Cliff finally rescues the princess from Dragoe's evil clutches.

Cliff Hanger features a hint mode that can be seen on most machines. A hint at the bottom of the screen will tell you when to press the joystick or action buttons. If you don't complete the action correctly, a screen will tell you what you should have done. Then, a scene of Cliff swinging from a noose appears (get it Cliff Hanger?), to let you know that you've lost one of your three lives.

Occasionally the game will tell you what to do through dialogue. In one scene, Cliff's car is chasing the bad guys when a voice yells, "Turn right!". Although the car does take a right turn on the screen, from the player's point of view the car is moving up the screen, so the joystick must be pushed up to complete the action.

An interesting argument could be made even more debatable with the introduction of Cliff Hanger, since it uses Japanese animation. Dragon's Lair uses American animation. As with everything else, there are debates as to who does it better, Japan or the United States. Your personal taste will determine which one you'll prefer, since both games showcase some superb artwork. The Japanese style is less realistic, grittier, and less conventional, while the American style is smoother, richer in detail, and more fantasy-oriented.

I like Cliff Hanger. It's a high quality game and answers the question, "Is there life after Dragon's Lair?" quite convincingly. Although it resembles Dragon's Lair in many ways, it's also a better game. It will spark many comparisons, since it follows in the footsteps of the original, but since it's a refinement, it will help further the genre.

DATA EAST'S PRO SOCCER

Following in the footsteps of Sega's Champion Baseball is Data East's Pro Soccer, which captures the action of the game better than any sports video ever has. Although it has never caught on domestically as a professional sport, soccer is a very popular game in schools and playgrounds.

The controls are simple enough, including a joystick on the left side with two buttons on the right, a short bass and a shoot/long pass. You play the blue team, trying to control the ball and score goals against the red team. There is no defensive play and you lose the game when the red team recovers the ball. You get three games for each video game you play.

The screen is divided into three parts. The bottom contains a large, 3-D representation of a soccer field from the blue team players' perspective. The upper left portion shows a "playfield scope," a small map of the entire playing field. The upper right screen houses the statistics-top score, your score, the number of goals you've scored, and the number of games left.

There is video scoring involved, including 2000 points for a centering goal, 1000 points for a goal, 500 for a long pass, 100 for a short pass, 10 points for dribbling the ball, and 10,000 for a hat trick.

The joystick manipulates the player with the ball. You begin at midfield, having to pass the ball among your teammates until you can find an open receiver downfield (the playfield scope will indicate him). A centering goal is scored from here. It's safer to kick a long pass to a teammate. To score a goal, you have to get the ball past a defender and the goalie. Once you score, the words NICE GOAL appear on the screen, then you receive the ball at midfield again.

The game is housed in a standard upright cabinet. The screen graphics are a bit jumpy, and the 3-D effects are not very smooth. It doesn't affect playing the game, however, but is more of a nuisance than a hinderance.

Pro Soccer is another of the many Data East games which is aimed at a special audience, and not an attempt to appeal to everyone.

BALLY/MIDWAY'S DISCS OF TRON

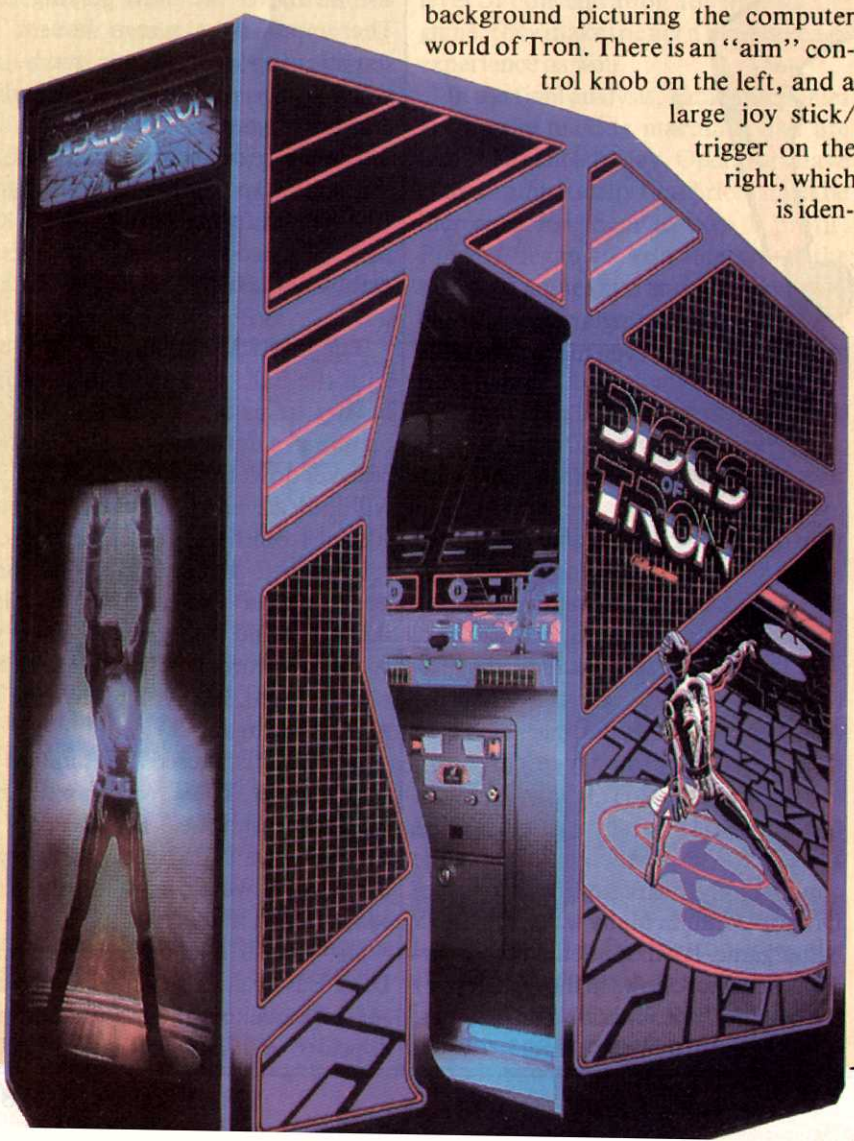
It's not often that a sequel is better than the original. Space Invaders Deluxe, Super Zaxxon, Frenzy, and Asteroids Deluxe are just a few of the games that were disappointing follow-up to their extremely successful progenitors. Ms. Pac-Man is the only sequel that has been as successful as the original. Millipede and Donkey Kong Junior did well, but never matched the phenomenal popularity Centipede and Donkey Kong created. Now, here's Discs of Tron, which is trying to keep the memory of the Disney movie alive.

This is the first time there's been a sequel video game based upon a movie (Bally did produce a sequel pinball machine based on the *Tommy* movie which was Capt. Fantastic). There is no *Tron* movie sequel planned, but the thought here is that Bally/Midway is shrewdly attempting to cash in on the movie's rerelease on cable and network, as well as videocassette and videodisc. In addition, Tron is famous enough in it's own right to warrant a second-go-round.

Whoever designed Discs of Tron really pulled out all the stops. The cabinet is a unique upright sit-down which looks similar to a telephone booth, only there's a comfortable padded "seat" that you can lean against while you play. Two speakers are mounted at either side of your head and the graphics on the cabinet help direct your full concentration on the screen.

The cabinet is the most comfortable I've ever experienced. No spectators can disturb you and no reflections can impair your view of the screen, while no bad lighting can spoil your game. The sound is loud, booming around the small room that is the cabinet. Yet, you don't have to sit down to play (those seats in the sit-down games are rarely very comfortable).

In back of the video screen is a 3-D background picturing the computer world of Tron. There is an "aim" control knob on the left, and a large joy stick/trigger on the right, which is identical to the original Tron stick, only it has a deflect button on top of the handle. Since the game play is so complex, several screens of directions appear after you insert your coins (yes, Discs of Tron is a 50 cent game), with comprehensive instructions on how to play and a scoring table. There is a start game button for those who know how to play and want to get to the action.



Discs of Tron tells the story of the movie better than the original, which merely combined 4 typical games in one. You meet Sark, your evil enemy, on an arena of large floating discs. The battle is carried out by flinging discs at each other. By making two direct hits on Sark you knock him off. You can fling up to three discs at once, then must wait for them to return. You can deflect the red discs that Sark hurls at you by pushing the deflect button, but only seven times in each round, or after you get a new man.

You direct your discs flight by aiming the cursor against one of the arena's walls and fire them by squeezing the joystick's trigger. The discs will head for the cursor. You can fire at the discs Sark throws at you, try to hit Sark, or hit the wall and have them ricochet off the wall and then strike Sark as they return to you. In later rounds chasers and super-chasers appear, which are electronic charges that try to knock you off. Hitting Sark is worth 1000 points, grazing him is 200, his discs are 100 each, energy pellets are 200, chasers are 400, while super-chasers are 800 points each.

At first the play is simple. Your man stands on one disc, your enemy on another, in front of your man. As play progresses, the action is played on four discs, then six. Later on, various barriers move in between the discs, breakable and unbreakable, stationary and unstationary. Playing becomes even more challenging and difficult when the floating discs can be moved up and down with the control knob, and the discs can be thrown from, and to, different heights.

Discs of Tron is good-looking, and is comfortable to play. Most important, it's a lot of fun to fling those discs at the little red Sarks as they scurry around on their floating discs. It's different from any game you're ever played, and might be the best that Bally/Midway has ever produced.

CENTURI'S AZTARAC

The first totally developed in-house video from Centuri, Aztarac is an ambitious vector graphic effort. It's your basic science fiction shoot 'em-up, with enough gimmicks and variations on the sci-fi theme to attract fans of that genre to this game. The storyline, told in the attract mode, goes like this, "4031 A.D. A thousand years of interstellar peace has come to an end. Terran starbases around the Zodiac are under attack from alien robot drones from beyond the Swan Nebula. Your mission as Starbase Commander is—defend the Starbases."

Aztarac features some tricky controls. On the left is a radar button. When it's pushed, the screen turns into a radar scope that shows you the location of the starbases and of any enemies in the area. Next to that is an aim button, which controls the direction of the gun turret that's located in the middle of your spaceship. The spaceship is controlled by a hand-grip joystick, which also houses a trigger and fires the gun.

The object of the game is to protect the starbases, which is anything but easy. Large formations of enemy ships slowly advance on a crash course towards the four quadrants of the starbases. You must blast any and all of the drones that threaten to collide with the base. Sometimes there are more than one formation approaching the quadrants at any given time. Blasting the enemy ships, flying your own ship, and aiming the gun that moves independently of the ship all at the same time, while occasionally checking the radar scope to learn of your enemy's whereabouts, is a tough job.

You catch a break, since you get unlimited ships until all four quadrants of a base are destroyed. After you do lose a ship, though, the enemy ships advance a little closer than when you last saw them, and there's not much time to prepare for battle once you get another ship. The best strategy is to not lose your ship and depend upon an unlimited free supply. It's also a good idea to protect just one or two quadrants when things get critical, so you have less to worry about.

It's even better if you're skillful enough to protect all four, since at the end of a round you get 1000 points for one quadrant, 2500 for two, 5000 for three, and 10,000 for four. When Condition "Green" is indicated, you can return your spaceship to the starbase and collect the bonuses. Serious trouble is indicated by Condition "Red," while Condition "Yellow" shows that there is impending danger. Condition "Boom" means that starbase quadrants are being totally wiped out.

The most interesting thing about Aztarac is the video screen, which features a large sheet of plastic, with a bubble in the middle. All of the action takes place in the bubble. The top left corner of the screen indicates your score, the top right corner what the condition of the starbases is, and the lower corners indicate your power and energy levels. These indicate when your ship has picked up power pods, which increase your speed, and energy pods, which give you rapid-fire.

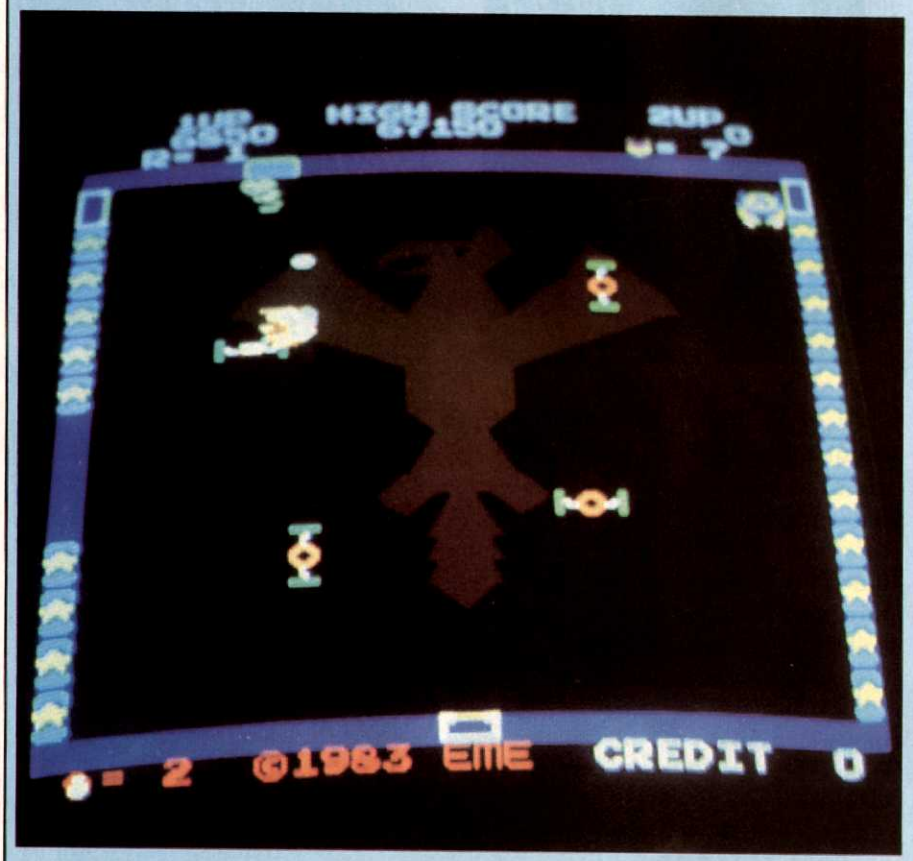
The vector graphics are state of the art, falling somewhere between Cosmic Chasm and Star Wars. Each starbase has a different configuration, and look more interesting than the last, as you advance through the signs of the Zodiac. They also become easier for the robot drones to destroy, as the shapes become more vulnerable to collisions.

Aztarac is a decent shooting game, but it's bound to be overlooked as we enter the era of the laserdisc. It doesn't offer anything outstanding in the way of game play, special effects, or sound. The bubble effect is nice, but can't compensate for an ordinary game playing challenge. It's not a bad game, but it will not make you forget all of the other shooting games nearby. it's a typical shoot 'em-up and can be enjoyed by those who like that kind of game.

EASTERN MICROELECTRONICS' HOCCER

Hoccer is a fantasy hockey game that plays surprisingly well, as it comes form an unknown company with no track record. It has enough different elements and variables to keep you involved, and enough good-natured hockey-type violence to make it fun.

Housed in a standard upright cabinet, Hoccer has a set of standard controls which include a central joystick flanked by two shoot buttons. The object of the game is to advance to the championship game and beat the Hawks — your opposing team. You move Andrew around the ice rink by manipulating the joystick and move his hockey stick by pushing the shoot button. You score points and advance to higher rounds of the tournament by scoring goals and disposing of opponents. Andrew's opponents are Clee and the Ords. Andrew can push them out of the way with his stick, or destroy them by shoving them into the sides of the rink after scoring a goal. Ords can also be wiped out during the game. You score goals by picking up the orb "hoc" and shooting it into the moving net (worth 1000 points). This freezes Clee and any Ords so you can destroy them. You can also shoot the hoc at them (for 500, 1000, 2000 and 4000 points). Clee, the yellow colored enemy, can pick up the orb and fire it back at Andrew, though, and if he hits him, it's curtains.



There are spinners (shades of pinball?) on the ice and when you fire the hoc through them, you can pick up some bonus points by hitting any flashing blocks on the side. You can score an extra man if you can destroy all 24 blocks, and advance to a higher round. You can also advance after you dispose of all of your opponents.

The first round is the first half of the quarterfinals (unlike hockey, which is played in three periods). The second round is the second half. Then you advance to the semifinals, and eventually into the finals.

Hoccer is a good video hockey game. The moving net is a lot more fun to shoot at than a stationary one would be, and being able to wipe out your opponents after a goal is a nice, fair advantage. It's not as much fun as the novelty game Chexx, but did you ever try to play that by yourself? Hoccer plays enough like real hockey and is different enough to satisfy hockey fans and many video game players who don't even care about hockey.

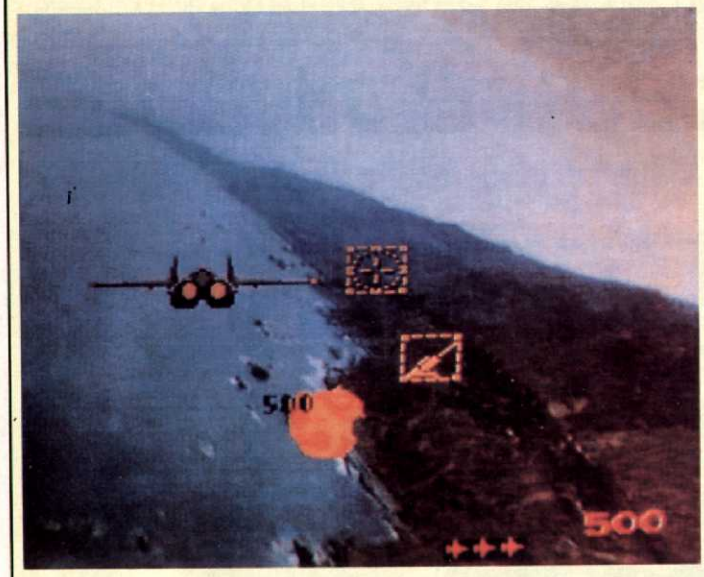
There's a certain charm to Hoccer, since it is so simple and unassuming. It's not dazzling, and it's not gimmicky, but it's fun to play. That's an element missing from a lot of games.

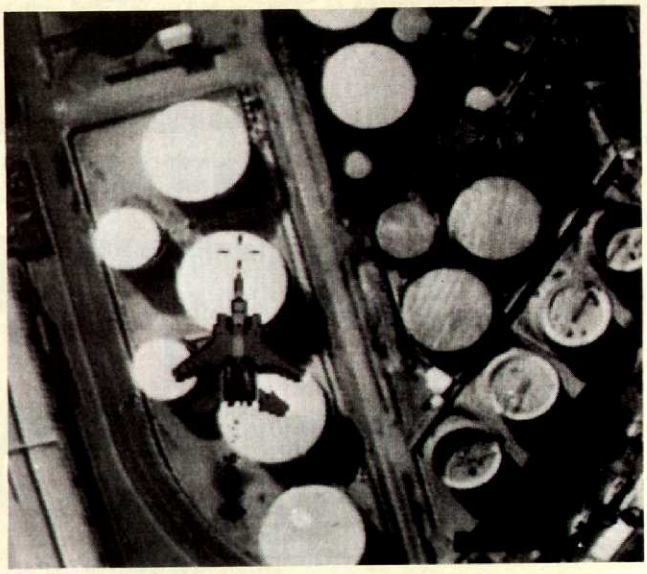
MYLSTARS' M.A.C.H. 3

M.A.C.H. 3 is Gottlieb/Mylstar's entry into the laserdisc sweepstakes. It's a live action flying game with the option of playing a fighter or bomber scenario. A very ambitious effort that has reportedly been in production for well over a year, it's the first live-action game to arrive in the States.

M.A.C.H. 3 is housed in a large sit-down cabinet that can fit two people, while the screen is optically magnified by a special glass over the picture. An extra-large hand-grip/joystick is situated in the middle, housed in a black box that has a pair of fire and bomb buttons on either side. The joystick has a trigger and two red buttons on the top of the handle.

There are actually two completely different games here. At the beginning of play, you must choose between the fighter or the bomber mode. In the fighter game, you fly over mountains, deserts, and clouds, and fire at ground





targets that appear on the screen. The targets fire back at your jet fighter, as do a few enemy aircraft. The targets, gunfire, explosions, and your fighter are all created by computer-generated graphics, which are super-imposed over the live film footage. The first-person perspective of the low flying jet fighter is breathtaking, although the targets look silly over the film footage. It's impossible to crash the jet into anything during the course of the flight because it is predetermined by the film. The object of the game is to blow up the air and ground targets while avoiding enemy bombs and missiles.

The bomber game is considerably slower paced. You guide a bomber over airports, factories, and cityscapes, pushing the red buttons to release bombs. Again, the object is to hit the computer-generated targets and avoid enemy flak and gunfire. The film was shot from high above the ground, and your point of view of everything, including your own bomber, is from above. Again, the game's action takes place on the targets, while the film footage is merely a backdrop.

M.A.C.H. 3 looks like a better game than it actually is. The cinematography is wonderful, the landscapes are breathtaking and the flying footage can make you dizzy. Unfortunately the designers decided to put those ugly computer graphics all over the screen, so you can't enjoy the ride. The joystick doesn't work as well as it should, since you can't control the direction of your ship with a great deal of accuracy, which hinders your enjoyment of what it does have to offer visually.

Since the game itself in M.A.C.H. 3 is so weak, it would be better if they scrapped it altogether and charged people to enjoy the movie. I'd gladly pay 50 cents to watch it, but I, for one, don't enjoy playing a game as confused and mixed up as this one. Conceptually and physically, M.A.C.H. 3 is a masterwork. The cabinet is comfortable and roomy, the colors in the film are bright and realistic, and the idea of flying around blowing up stuff on film is super. You'd think that after all the work they put into it, they'd have made the game more worthwhile. Well, there's always next time.

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THE FLIPSIDE

Changing Times

By Zelmo

You've probably heard it said many times before but the more things change the more they stay the same, especially in the world of arcade games. For years, before the advent of video in its present form, old-timers in the coin-op industry used to see new games and comment about how different 'innovations' weren't anything more than readaptations of previous designs.

Today, even with the advances in technology, we're still seeing models which are being inspired more by former coin-op efforts. Some, as is the case with many of the current pinball machines, are direct knock-offs of games from a number of years ago, where a coating of paint and modifications in scoring are the only differences. However, the basic principles of game play, whether for video or pinball, are getting closer attention and scrutiny as designers look for clues to enhance or strengthen a particular model.

With more pinballs hitting the streets than has been the case for almost two years, the prevailing trend seems to indicate a renewed emphasis on standard themes as well as remakes of former hits which might offer an embellishment or two. Anyway you look at it, flipper game players are quickly gaining a greater choice of models and board layouts.

However, before we get to this month's machines on view, as I was writing this column, I received word that a truly great and dear man, a legend in the amusement game industry, had passed away. His name was Harry Williams.

I was extremely fortunate to have met Harry back in 1977, when I attended my first industry trade show in Chicago, and maintained a true hero worship of him which still endures and always will. Having known of his exploits and accomplishments, it was an incredible experience to find myself face to face with a small, unassuming man in his early seventies who had a definite glint in his eye when it came to conversations about coin-op in general and pinball in particular.

There I was with a friend of mine and we were talking to Harry Williams, who stood before us looking more like someone's grandfather rather than an individual who had helped shape the history of coin-op games. And the three of us were off to take a closer look at all the games on display at the convention. I remember the day with a sense of wonderment and joy that I was able to have experienced a really special occasion. But now Harry is gone and with him there goes an irreplaceable portion of history.

If, however, you're interested in getting a feeling for what the arcade busi-

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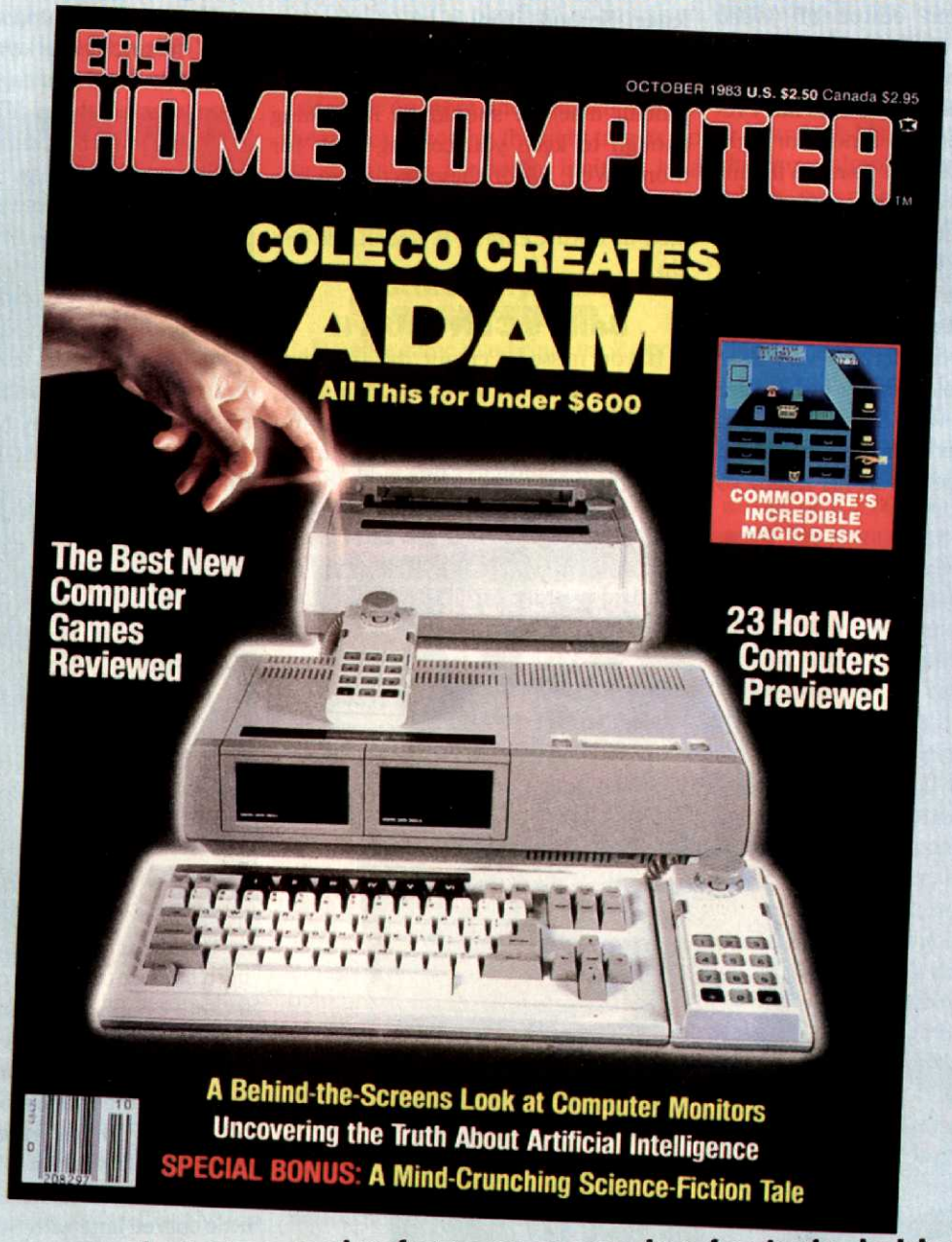

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ness is all about, how it started and who the people were behind the scenes, including Harry Williams, I strongly recommend that you get your hands on a book called *PINBALL!* (E.P. Dutton) by Roger C. Sharpe with photographs by James Hamilton. In it, Roger, yes folks, the current editor of *Video Games*, refers to Harry Williams as the "Thomas Edison" of the pinball industry. Starting back in 1929, Harry remained a designer and innovator right up until his death. In fact, Williams Electronics, the company which brought you Defender, Robotron and other video hits, was begun by Harry almost forty years ago.

The industry has lost a giant, I've lost someone who I considered a very dear friend and game players everywhere are a little worse off with his passing. But although Harry is gone, hopefully he will never be forgotten as his legacy to the world of coin-op entertainment continues to thrive and expand from its crude beginnings.

In many ways the two games on view this month represent a sense of what Harry Williams always felt pinball could be. First, a machine must offer a challenge. Second, it must be fun to play. Third, it should feature a little bit of the unexpected. And last, but not least, a pinball machine should be interesting enough to keep you coming back for more. Well, all of these factors in one way or another manage to be incorporated in both Centaur II and Rack 'em Up.

Bally's CENTAUR II

If you missed Centaur the first time around when Bally introduced it in 1981, you're in luck because it's back and just as solid as it was initially. For pinball buffs the most noticeable aspect of the game is that it's the only flipper machine with almost totally black and white graphics. The playfield lights provide a broader range of color with reds, ambers, greens and blues. But add in some vocal effects, and the game is a total package for novice and skilled players alike.

Housed in an updated cabinet, the 'orb' feature is the key to Centaur II's play appeal and challenge. There are four drop targets in the middle of the playfield (O-R-B-S) which tie into the possibility of multi, multi-ball play. Knock all these targets down, in or out of sequence, and you'll add one captive ball in reserve, with a maximum of four able to be stored at any one time. If you can hit the targets in sequence, light all the bottom lights in the outer and inner lanes near the flippers, or make a long shot up a narrow channel on the right side at the appropriate time, you're ready for instant multiple ball play. And the rest of the board balances off different feature values and a range of shooting angles for a game where everything works in perfect harmony.

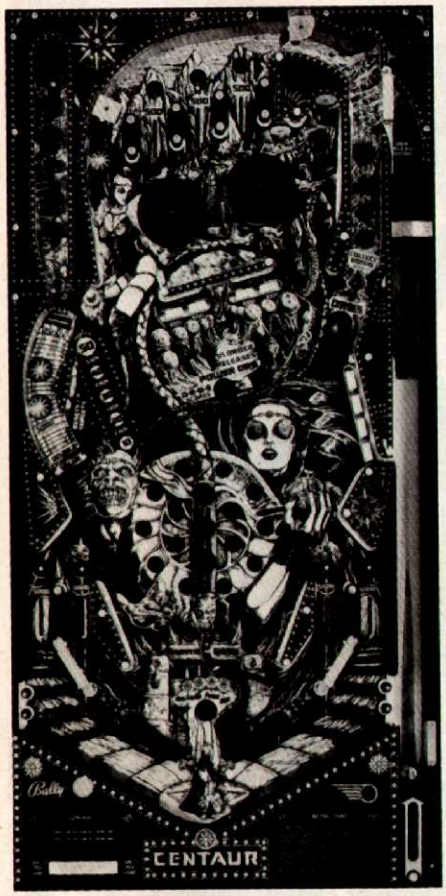
The action begins with three lanes on top which can mean bonus multiplier values from 2X to 5X. Just below are two thumper bumpers, while at the right, and a little above, is a slightly recessed target which can result in the building up of points from another target area on the board. Further over on the right is the long, narrow lane we mentioned before which can activate multi-ball play or score multiple point totals when lit. Over at the left, supplying a balance of shots from side to side, is a captive ball/in-line target set up where scoring can increase from 10,000 up to 50,000 points, out-hole bonus advance values and the chance to also gain multiple ball play if you have any stored and can hit the last target in this 'chamber.'

Move down and the left side features a little curved lane with two star roll-overs and a perfect angle for shooting a ball through from the bottom right flipper in order to make contact with that 'chamber' above on the follow through. At the right is another drop target bank for increased values, while the middle offers those 'orb' targets.

As for the bottom, there are interior lanes down to the flippers and outside lanes which incorporate a couple of posts and the chance to 'nudge' through a ball and save it for further play. In addition, regarding the bottom lanes as well as the top ones, their lights can be

controlled and manuevered by just pressing the right flipper button at the precise time in order to help fill out the sequence.

On the surface, what's nice about the Centaur II playfield design is that all target areas are accessible from either flipper, left to right or right to left, as well as via nicely timed reverses. The result is that you get a sense of control



over the board, which helps in establishing a personal strategy and approach to play. Even if you never get multi-ball play, there's still more than enough to aim for, with high scoring possible if you focus on the right side drop target bank, that left side little curved lane and the captive ball chamber, as well as the top lanes for multiplier values.

Depending upon how the owner of your local arcade sets up the game, the programming and memory allow for holding over out-hole bonus points, up to 60,000 and multiplier values, up to 5X, so it's conceivable that you might have 300,000 points in the bank before you begin play on any given ball. It's definitely a case of building up in action where what you do in the beginning will have an effect on what you can accomplish at the end.

Add in the potential of multi, multi-ball play, which can also be held over in memory, and you have a totally dynamic dimension to Centaur II where the action can be fast paced and incredibly challenging. After all, you can get to the point where you might be able to try your skills against two, three or even four balls on the playfield at any given time as they get kicked up from under a trap door at the top right of the field. Lose one or more and you can still get them back if you hit the right targets, so the potentials are really limitless in a well-conceived game that features something for almost everyone.

Gottlieb/Mylstar's RACK 'EM UP

Here's a game that brings back a proven pinball theme where there's really nothing fancy to surprise you except for some well-placed features, strong shot possibilities and a rhythm of play that ties everything together. It's the type of design this company was noted for back in the late Sixties and Seventies when they produced pinball machines which were fair to beginners and still difficult to master for flipper aces.

The object of Rack 'em Up is to complete a rack of fifteen balls in a pool game where the different targets and lanes are utilized for the various stripes and solids. And, interestingly, many of the targets have been used for double duty with two 'balls' attainable either with one shot, or via a repeat hit at the appropriate time.

The game begins with four lanes at the top controlling dual values from left to right of the 3 & 11, 4 & 12, 5 & 13 and 6 & 14. The lights of the 'balls' which haven't been knocked out, flash to indicate which one you'll get if you roll down a given lane or hit a particular target. And the placement of the lights can be controlled at the start of play by pressing the right flipper button until you get the flashing lights lined up the way you want. Once a point is scored on the playfield, the lights are fixed and can only be changed during play by shooting the ball through the spinner or landing in a little hidden area at the top left of the board.

There are a trio of thumper bumpers below the top lanes which provide some good rebounding action, while on the left side a four drop target bank sits (1 & 9, 2 & 10, 3 & 11 and 4 & 12), fronting a little curl turnaround to a kick-back kicker and the place to get the '8' ball when the rest of the rack has been completed. A nice touch is that once you land in this spot the ball is propelled back up to the top lanes and also provides a chance to position any necessary target or lane lights before play continues.

Move down on the left side and there's an outside lane, which can mean the 1 when lit, and leads down to the flipper area. Over at the right is an outside 9 lane, which is fronted by a slightly angled three bank of drop targets (5 & 13, 6 & 14 and 7 & 15). Just to the middle from this is an almost free-standing spinner which, surprisingly, is placed in such a way that a direct shot through will normally result in a satisfying long flight back up and around to the top of the board. Hitting the spinner will also affect the flashing lights which remain, whether you're rolling down through it, or coming up from the flippers.

As for scoring values, each 'ball' target or lane will score 500 points when not lit, or 10,000 points when lit, as well as 20,000 points if you manage to have both number values lit at the same time. The spinner, meanwhile, scores 1,000 points per revolution when not lit, and 10,000 points per spin when it is lit.

Finishing off the board is a lower right target which offers a variety of values from lighting the spinner, to spotting a number or even giving an extra ball when hit. The bottom left features a short double lane configuration leading down to the flipper, as well as a chance to get the 10 or 2, while the right side outer lane means the 15, when lit, and an inside lane leading down to the flipper will reward the 7 when it's flashing. Tieing everything together is the potential of gaining bonus multiplier values from 3X to 5X and 10X whenever you can complete a drop target bank. So get a rack finished and scoring can mean up to 450,000 points on any one ball.

What makes Rack 'em Up effective as a pinball machine is that there's a true feeling of shooting the ball off the flippers and making a direct hit on a given target. It's almost like playing a pool game with a cue. There's plenty of action and the shots are straightforward enough with balance from side to side and top to bottom. Besides the long shots to the top left side drop target bank and 8 ball area from the right flipper, you also get a closer, more precise target which can mean an instantaneous extra ball when lit. As for the left flipper, you have the proximity of that lower right

bank of drop targets as well as that inviting spinner and a chance to get back up to the top of the board.

Timing is important here, along with the strategy of setting up any flashing lights before you pull back the plunger as you try to complete a rack and begin again. The game will hold over the scoring values of up to two racks, and each time you go through all fifteen balls, the bottom left outside lane lights for a special. There are no frills to the action, just the need to maximize shot selections and placements since everything you've done on a given ball is held over in memory for your next turn. So Rack 'em Up takes a similar approach found in Centaur II with a building up of action and scoring values throughout play.

Even if you've never gotten into playing pool for real, the way it's integrated here thematically, providing a definite relationship and correlation between features, makes this game one of the best to come around in quite a while. You can usually keep a feeling of control when playing and never lose sight of what your end goals are, although a minor drawback has to do with Gottlieb/Mylstar pinball machines, in general, if you play in areas where you can't win a free game and, instead, have to settle for add-a-ball action. There's no way to accumulate more than one extra ball on any given turn even if you have earned extras.

This does detract from the total playability of Rack 'em Up, but it's not anything major, although we wouldn't mind seeing this programming capability incorporated in future games. However, this aspect aside, the best part of the latest effort from Northlake, Illinois is that the flippers seem to be placed a little closer together than usual so that players can make some really incredible saves and shots that only enhance the overall enjoyment.

EXTENDED PLAY

In looking at what's coming up for pinball fans, the future appears to be very promising with three of the major domestic manufacturers remaining very commited to this form of coin-op entertainment. Gottlieb/Mylstar is rapidly turning out original models as well as remakes of past favorites (Ready, Air. . . Fire! is a machine which should be making the rounds soon.) Williams has already received some very favorable response to their latest, Firepower II which is a substantially enhanced adaptation of the 1980 classic. Bally is currently testing a follow-up to the very successful pin-vid Baby Pac-Man, as well as some other 'conventional' machines, while rumors have it that Stern may also get back in the business before too long. In addition, there are rumblings that Game Plan, which hit the market in a big way with Sharpshooter back in 1979, might try their hand again in appealing to a new generation of players. Add to this the efforts of Zaccaria, an Italian manufacturer attempting to make inroads on these shores with at least two loaded games: Pinball Champ and Soccer Kings, and it's easy to see why pinball is on its way back.

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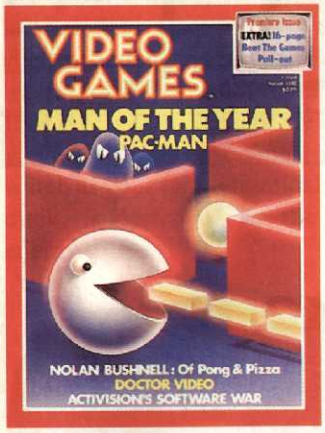

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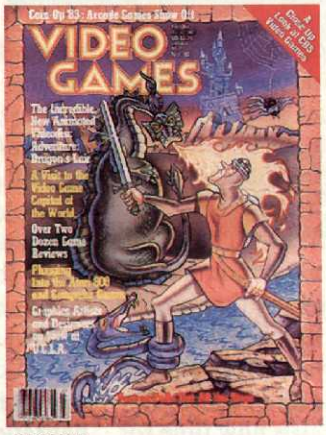

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SOFT SPOT

The Sleeping Giant Awakens

By Dan Persons and Perry Greenberg

Deadlines are dangerous. No sooner did I finish congratulating Atari for continuing to support the 2600 game system with a computer keyboard and a voice synthesis module, than I'm reading that they're dropping both products because, say they, both devices would have been too expensive.

Well, if Atari is backing down on their hardware support for the VCS, the same can't be said regarding quality games for the system. The evidence takes the form of a large number of carts, licenses from arcade games, movies and TV. No Pac-Men or E.T.'s here. Atari has finally learned that players have stopped buying carts merely on the basis of a famous title and have become very particular with their dollars, looking to see which game offers the best in graphics and play action. Atari has also caught on that they no longer have the field to themselves and that there are more than a few manufacturers out there waiting to give gamers everything they want.

The result is this current crop of cartridges. All of them are at least good, and some are possibly the best games ever designed for the VCS. What also distinguishes all of them is that there isn't a single original title in the bunch. After having been burned by the less-than-enthusiastic response to such games as Yar's Revenge and Demons to Diamonds, Atari has apparently abandoned the development of original themes and has decided to concentrate on adapting arcade titles and translating plots from the movies and TV. While the practice is guaranteed to at least attract attention, it also almost promises that no innovative concepts are in the offing for the near future. There's no equivalent of Star Raiders coming up, nothing that goes beyond that arcade standard of "keep it quick and short." Atari's designers have shown that they are as adept at using the 2600 as any other manufacturer. It's now time for them to blaze a few trails.

For the present, though, gamers can rejoice that a once sleeping giant has awakened and is ready to reassume its position of dominance in the field. With Atari's new releases, and with the many fine games coming from other manufacturers, this holiday season should be one of non-stop action.

—Dan Persons

ROBOT TANK
(Activision/2600)

The enemy has invaded our borders with sophisticated radio-controlled robot tanks. Even as you read this, tanks are converging for the climatic battle on the outskirts of Santa Clara. It sounds a little strange, but that's the scenario of **Robot Tank**, Activision's new game for the Atari 2600.

The enemy isn't the only one with robot tanks. The good old USA, always at the forefront of technological achievement, has equipped you with your remote-controlled rolling arsenal.

On your screen you see the feed from the tank's front-mounted TV camera, as well as a radar screen display that gives you an indication of enemy positions.

At the bottom of the screen are damage indicators that keep you aprised of the operating condition of your treads, cannon, TV camera, and radar. Your tank is maneuvered around the battlefield with your joystick and the cannon is fired by pressing the fire button. The passage of time is indicated by a twenty-four hour clock at the top of the screen.

Each day and night cycle can bring drastically different weather conditions. Rain will impede your tank's movement, snow makes it slip and slide uncontrollably, while fog reduces the visibility. The enemy is, of course, constantly firing back at you. Direct hits

will destroy your tank, while glancing blows may only cause damage.

A damaged piece of equipment will still operate, to a certain extent, but for all practical purposes it will be just slightly better than useless. Since there is no way to repair a damaged tank, if all four pieces of equipment are taken out, you won't be able to do much more than watch as your tank, practically a sitting duck, is destroyed by the merciless enemy.

The enemy's strategy varies from tank to tank, but you'll only have to face one tank at a time. If you knock out an entire squadron of twelve tanks you're awarded a bonus tank and the game resumes at a higher level.

Yeah, I know: Battlezone. But even if Atari was first in the arcades with a first-person tank game, they can't hold a patent on the genre. No matter who came up with the idea first, designer Alan Miller has made Robot Tank a good, no-nonsense combat game with superb graphics.

The flat terrain moves underneath your tank as you roll forward and backward, and the sunset illuminates the sky in layers of red and orange. It's even worth losing a tank just to see the screen being realistically engulfed by flickering static, as if every circuit in the tank's TV relay was being blown, one by one.

As with many tank combat games, there's not much depth to the plotline: It's all dodge the missles and blast the bad guys. However, the enemy is crafty and the constantly changing weather conditions keep you on your toes.

Perhaps we should be moving on from this simple sort of shoot 'em-up, but Robot Tank has been done with such obvious care and so much style that I can't help but love it. It's a game that's beautiful to watch and a pleasure to play. I don't know how the folks at Activision manage to keep topping themselves, but I hope they never stop.

—D.P.

BATTLEZONE

(Atari/2600)

Battlezone has been brought down to earth for Atari's adaptation of their arcade game. Instead of the barren wastes of the moon, this particular battle takes place on Earth, on a flat plane surrounded by mountains. Instead of the sleep, wedge-shaped vector graphic tanks of the arcade game, you face off against a slightly more ordinary looking enemy. And rather than peering out the window of your tank through a set of goggles, your point of view is set just slightly above your tank's turret, with your tank visible in the lower portion of the screen. Aside from that, game play for the 2600 is quite close to the original.

There's a radar scanner at the top of the screen to help you locate the enemy. Your tank's treads are operated by the joystick, left and right to turn, forward and back to advance and retreat, and diagonally to combine motions. The action button fires your cannon, with only one shot permitted on-screen at a time.

At first, you only have to contend with one tank and a harmless, but high scoring flying-saucer. But as the game progresses the enemy becomes more aggressive, and there are more and more of them on screen at one time, apparently up to a maximum of three. At later stages of the game you also have to face a swift moving Supertank, and Fighters, airplane-like devices that advance in a zig-zagging pattern and fire at point blank range. You start out with five tanks and there are three player selectable skill levels to choose from.

I normally try to avoid detailed comparisons of two games, but in this case the similarities between Battlezone and Activision's Robot Tank are so great that it's almost impossible to avoid. In fact, the sequences depicting your tank biting the dust are so alike in both games, with your screen dissolving into a mass of static that one can't help but wonder if either Atari or Activision aren't engaging in a little bit of corporate espionage.

In other regards, Battlezone's graphics are every bit as good as Robot Tank's. There's a realistic 3-D effect to the movement and the sight of your tank at the bottom with its treads moving in response to your commands is a nice touch. However, it's in the area of game play that the two carts veer off sharply. Activision has gone for a wide variety of game screens in Robot Tank, with night and day sequences, changing weather conditions, and the ability of the enemy's blasts to merely damage, rather than totally destroy your tank. But you only encounter one tank at a time, making the major strategy of the game, track the tank/avoid its missiles/blast it to bits, a little repetitious.

Battlezone's war, meanwhile, takes place on a perpetually sunny plane, a battlefield where time stands still. There's no possibility of the enemy's missiles merely causing a glancing blow. If you're fired upon, nine times out of ten you're done for. But, unlike Robot Tank, you can actually maneuver around the enemy, giving you a chance to drive out of the range of their cannons and then swing your tank around, taking a shot at them before they have the chance to gain their bearings.

And, if there's no discernable passage of time in Battlezone, there's also no break in the action. The enemy keeps coming at you, faster, shrewder and more aggressive with each tank you blast. The variety of targets, combined with their numbers and ability to fire upon you from behind you, makes Battlezone's basic strategy somewhat more complex than Robot Tank's.

So what's your preference? If you want a game that gives you a sense of the passage of time along with the heart-rending feeling of guiding a partially disabled tank against a nimble and aggressive enemy, then Robot Tank is for you. But if you want a game with non-stop action, a battlefield that teems with

a wide variety of targets, and a 3-D effect more directly related to the game play, then check out Battlezone.

—D.P.

POLE POSITION

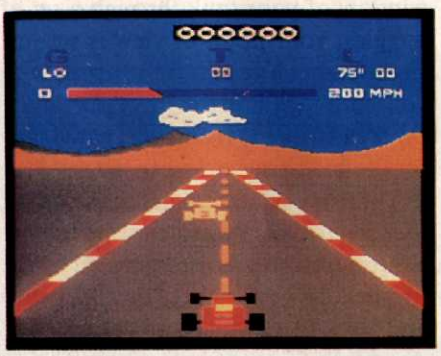
(Atari/2600)

Enduro is one of the most popular racing games for the Atari 2600. Wait, let me correct that: Enduro *was* one of the most popular games for the Atari 2600. I normally couldn't make such rash statements, but I've just gotten a look at Atari's adaptation of Pole Position for the 2600. This one leaves all other racing games in the dust.

Like the arcade game on which it's based, **Pole Position** gives you a first-person view from behind and just slightly above your racer. The road stretches off into the distance and, as you take the numerous curves of the race course, the mountains in the background scroll in realistic perspective. A joystick is used to control your car, with left and right handling the steering, forward and back taking care of the gear shift and the fire button operating the brakes. There's no accelerator, you always move at the maximum speed for the gear you're in unless you bump up against the shoulder of the road or involved in an accident.

Before you can enter the main race, you must run a qualifying lap that will determine your starting position amongst the other contenders. If you can negotiate the various twists and turns of the course, avoid collisions with the other racers and complete the lap in under seventy-three seconds, you will have earned the right to compete in the Grand Prix. The Grand Prix is distinguished from the qualifying lap primarily by the larger number of opponents that you encounter and by their determination to keep you back, even if it means crashing into you. Complete the Grand Prix under the time limit, and you are awarded bonus time to rack up as many miles as possible. Your racer comes equipped with a speedometer, a gear indicator, a distance indicator and an odometer-style score indicator, all of which are at the top of the screen.

In some ways, this is Pole Position in name only. The course, as depicted in the attract mode's overhead view, bears only a passing resemblance to the Fuji race course featured in the arcade game. There's no indication of what position you've achieved at the start of the Grand Prix, not that it really matters because you start out each race as the only car onscreen. You'll only encounter one rival at a time, so you'll never experience the hair-raising thrill of maneuvering between two speeding autos. Unlike the original, your racer is restricted to the road itself, which means that you can't pass your rivals by moving onto the shoulder of the road, thereby running the risk of crashing into a billboard. That's okay, because there aren't any billboards, either.



Yet if the game is an admittedly stripped-down version of the arcade original, it still is the best racing game I've seen for the 2600. Atari has copied the bright color scheme of the arcade game, making this one of the cheeriest games to look at. There's a true sense of depth and perspective to the graphics. Unlike the steering mechanism of Enduro, where your car just slides back-and-forth, Pole Position's joystick control is surprisingly realistic. You can almost feel the momentum as you coax your racer through curves and around your rivals. As for your foes, only one of them may appear on screen at a time, but they are mean competitors, especially in the Grand Prix where they seem to be hell-bent on involving you in an accident. The best approach to them is to try to stay behind until you are almost upon them, then quickly veer your car around the opposing car.

As an old Night Driver fan, I couldn't be more satisfied with Pole Position. It is a superb racing game that should have the folks at Activision looking to their laurels. A definitive must-have.

—D.P.

BUZZ BOMBER

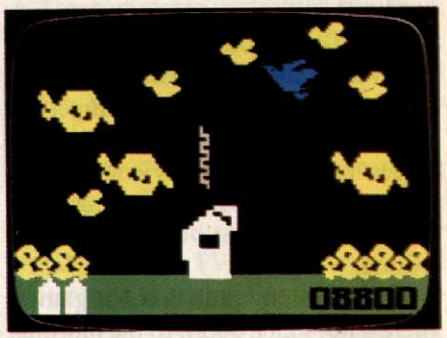
(Mattel/Intellivision)

Buzz Bomber by Intellivision is atypical slide-and-shoot game incorporating a novel scenario and some clever nuances. The object of the game is to move your spray can along the bottom of the screen and to spray the bees that are crisscrossing the screen, along invisible flight paths called tiers. Each hit results in a tailspin and the bee leaving a honeycomb in its wake. If you fail to clobber the bee before he makes it down to the level, or tier, of your sprayer he pollinates flowers that pop up around your sprayer. These flowers will restrict the movement of your sprayer and eventually hem it in, causing you to lose one of your three spray cans.

Each can provides 56 sprays and you see the level of sprays dwindle each time you use eight sprays. If you fail to end the round with 56 sprays or less you lose one of your cans. Regardless of how much spray is left in your can it will refill after completing a level.

Besides the yellow worker bees, there are the more dangerous killer bees to contend with. They turn into red honeycombs when hit. While they do not bounce off a honeycomb and drop one tier, as do worker bees, they will reverse direction and drop a tier when they reach the side of the screen.

From time to time, a hummingbird will appear. Hummingbirds, are valuable allies that dart around eating



honeycombs giving you more room to shoot and extra points. Try not to spray the hummingbird because even though it won't kill it, it makes it "sick" causing it to leave the screen for a while.

Sometimes a worker will get stuck between a honeycomb and the side of the screen. When this happens he creates a beehive. This beehive is worth big points when you complete a level so don't shoot it.

Buzz Bomer is an attractive game with appealing graphics and sound effects. I especially like the soundtrack that plays the "Flight of the Bumblebee" as the action ensues. The addition of killer bees, hummingbirds and honeycombs generate renewed interest into a game that is essentially a very traditional old-fashioned slide-and-shoot game. Perhaps Mattel, a company that pioneered complex strategy thinking man's game, hoped to revive sinking fortunes with an old-fashioned, arcade-type game. Although I enjoyed playing Buzz Bomber, I think most players at this stage expect and want more than slide-and-shoot games which in essence is all your setting in Buzz Bomber.

—P.G.

HAPPY TRAILS
(Activision/2600)

Activision's Carol Shaw who designed River Raid, one of the best shoot 'em-ups ever for the VCS, displays her versatility as a game programmer by creating **Happy Trails** which is a total departure from her last hit.

Happy Trails for the vastly different Intellivison system is the antithesis of River Raid. Instead of a mindless shoot-and-dodge scenario we have a clever strategy game where analytical thinking and the ability to make quick complex judgements are the key to success. In fact, it's kind of a video chess game.

The object of the game is to guide our white hatted hero along a maze by *not* controlling him directly, as he moves automatically, but by moving portions of the trail or maze he hops along and creating different paths. The playing field or "Badlands", as it's known in the game, is composed of movable blocks that slide via the disk controller. By moving the blocks you create new trails that lead to the money sacks lying about the trail. Collect all the money bags within the alloted time and move to the next more complex playing field (Badlands grow from a 2 x 2 block puzzle to a 5 x 8 block puzzle at the most difficutl level).

Also to be contended with is the vicious Black Bart who appears in later rounds. Making contact with him results in the loss of a life unless you've been deputized. Deputizing is rather a simple matter. Along the trail there's a figure of a star. Make contact with that star and you momentarily flash. If you bump into Bart while flashing you waste

him and earn an additional 600 pts. The star in essence is a western "power dot."

The same is equipped with appealing graphic and lively sound effects as you clip clop along moving trails trying desperately to pick up bags and avoiding dead ends or collisions with Bart.

I thoroughly enjoy playing Happy Trails. It's a real challenging brain teaser that tests your ability to form complex patterns quickly. Probably an easy chore for a computer but a tough one for the computer's creators!

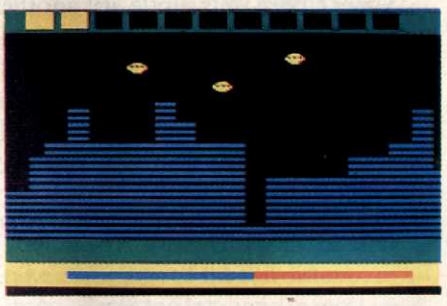
—P.G.

SUPER COBRA
(Parker Brothers/2600)

We know you've been through the wars, battled aliens and mutants with weapons that went all the way from laser pistols to heat-seeking missiles. And, when it was all over, you hung up your joystick, vowing never again to takeup arms against another living creature. Well, guess what: There's an enemy installation that has to be destroyed and only one person is skilled enough to tackle the mission. Good luck, we're countin' on ya.

In other words, Uncle Sam may not want you but the Parker Brothers do, in order to play their adaptation of Konami's **Super Cobra** for the Atari 2600. You're a helicopter pilot this time, trying to destroy as much of an enemy missle base as possible. Your joystick controls the movement of your 'copter up, down, left and right across the left half of the screen. Pressing the fire button alternately launches your two weapons: Missiles that are used to destroy targets directly in front of your helicopter and bombs that arc down to the ground and are best used to take out land-based targets. Across the top of the screen is a series of boxes that show you your progress through the installation, while at the bottom is a horizontal fuel indicator. As the hilly terrain scrolls from left to right, the various targets are brought into range of your weapons.

The enemy primarily has two types of defense. Missiles can be launched in groups and travel a vertical path up to the top of the screen. Gun turrets put up a steady barrage of flak. The Missiles can be dodged or destroyed both before and after they are launched, while the only way to make it past the blasts put up by the guns is to swoop down and destroy the turrets. A third type of ground target is the fuel tank. Destroy it and you not only gain points, but you also replenish your steadily dwindling fuel supply.



As you blast your way from board to board, the scenery changes from hilly terrain to crowded cities to tortuous subterranean caverns. meanwhile, the enemy is constantly springing new traps on you, such as airborne yellow globes that attempt to get into the path of your 'copter, and stalactites that constantly fall from the roofs of the caves. You start out with three lives and, even if you use them all up, you can still continue the course from the start of the last board encountered by pressing the fire button when the work "CONTINUE?" appears onscreen. You can also vary the difficulty of the game by choosing one of the three skill levels available.

Parker Brothers once again proves themselves to be the master of detail with this one-player game. Super Cobra features such nice nuances as a miniscule, flashing landing beacon on your helicopter and a brief musical interlude between waves. As is common in streak and shoot games for the 2600, the

animation is a bit rough. But that's more than made up for by the difficulty of the obstacle course. The caves, with their cramped ceilings and near vertical tunnels, are especially tricky. In any case, keep your helicopter midway between the far left and the center of the screen, to allow you room to maneuver in either direction, and, for God's sake, keep firing! There are always plenty of targets to hit, and continually pumping the fire button means that you don't have to remember whether the next shot you'll pull off will be a missile or a bomb. In spite of the three skill levels, I suggest starting at the medium speed, since the slow setting is so sluggish that even novices may find themselves nodding off in the middle of a wave. Similarly, only die-hard arcaders should attempt the fast option. The course is hard enough without the scenery coming up at you at what seems to be MACH 5.

Super Cobra isn't subtle, it's another example of the shoot-everything-in-sight school of gaming, but it is a well executed translation of the arcade game. If you haven't quite had your fill of wholesale destruction, you may find the ride very worthwhile.

—D.P.

CENTIPEDE

(Atari/2600)

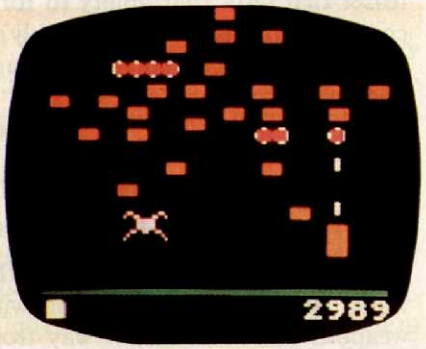
I must admit that I've never been a big fan of **Centipede**. As a matter of fact, in spite of the exhortations of friends and family, I've never even bothered to play the arcade game. I've come close to it. I've gotten to the point where I stand in front of the cabinet, thinking to myself, "Y'know, so many people swear by Centipede, I ought to give it at least one try."

So, now that Atari has come out with an adaptation of Centipede for their own 2600 game system, I was anxious to see whether the game lived up to its reputation. Unlike many of my friends, I have not been converted into a fervent Centipoid. However, I was happy to find that this version, far from being the unappetizing little dodge-and-shoot that I thought it would be, is actually one of the nicest adaptations that Atari has done for the 2600 in a long time.

The object of this game is to protect a mushroom-dotted garden from a giant, rampaging centipede. At the bottom of the screen is your cannon. Manipulating the joystick moves the cannon left and right the full width of the screen, up and down within the bottom third of the screen. The fire button sends cannon blasts upward.

The centipede, starting at the top of the screen, winds its way down towards your cannon. Running into either the sides of the screen or a mushroom will cause the centipede to make a U-turn and step down a level. If you shoot any centipede segment, it turns into a mushroom rooted to the spot where the segment was hit. Hitting the centipede in the head earns you the most points, while hitting any other body segment will split the centipede in half, forcing you to contend with two, or more, of the crawling insects. Also infesting the garden are spiders, termites, and scorpions.

Spiders like nothing better than to restrict the movement of your cannon by jumping up and down in the area your cannon moves in. The points netted for



shooting the spider depend on how close it is to your cannon when hit. Termites quickly drop down from the top of the screen, leaving in their wake tons of mushrooms. Scorpions cross the screen from left to right, turning two or three mushrooms into poisonous toadstools. If a centipede hits a toadstool, it heads down towards the bottom of the screen in a straight line, a hazard but also a fabulous opportunity to whittle down centipede segments, if you're fast on the trigger. Letting any of these insects hit your cannon will cost you a life.

Purists will probably have a fit over the trade-offs Atari has made in order to remain true to the game play of the arcade original. The orientation of the screen has, by necessity, changed from the vertical format used in the arcade to the horizontal format used at home. The graphics suffer slightly, the mushrooms and cannon having been reduced to featureless rectangles. The joystick control only convinces me that Atari can't release it's trak-ball too soon for my taste. As it is, the cannon moves too quickly across the screen, making precise aiming difficult, at best.

However, if you can look past the cosmetic changes and reconcile yourself to manipulating the joystick with a light touch, you might find that Centipede is one of the best adaptations that Atari has done for the 2600 since Missile Command. The game plays so close to the original that only the most rabid arcade fans will be disappointed. You can even use time honored arcade strategies, such as carving a narrow, vertical tunnel in the mushrooms to trap the centipede, making it easy prey for the rapid fire shots of your cannon.

—D.P.

CAKEWALK

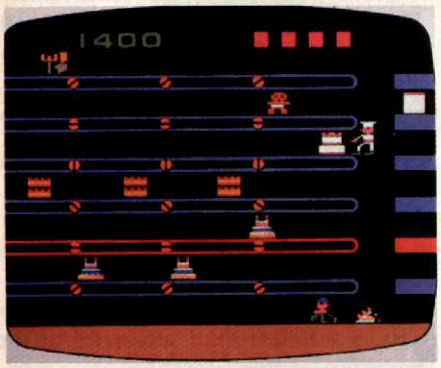
(CommVid/2600)

The folks at CommVid must have had Jackie Gleason in mind when they created **Cakewalk**, their new game for the Atari 2600. This one-player game is closely based on a routine that the famed comedian used to do. In a mechanized bakery, a hapless human must grab and box birthday cakes that come speeding down a conveyor belt. However, where Mr. Gleason only had to deal with one belt, your onscreen baker must contend with six conveyors, arranged one on top of the other and stretching across the majority of the screen. Your baker is in a vertical channel near the right hand edge of the screen and is maneuvered up and down with your joystick. Boxing the cake is easy: Just position your baker so that he can grab the cake as it reaches the end of its conveyor belt. When he touches the cake, it is automatically boxed and planted on another conveyor belt that carries it offscreen.

The problem arises in knowing which cake to box first, since the conveyor belts have a tendency to release two or more cakes simultaneously. Miss a cake, and it goes tumbling to the floor of the bakery, where a janitor sweeps up the mess. If it all gets too confusing, you can use the fire button to temporarily stop a conveyor belt. Only one belt can be frozen at

a time, and the belt remains immobile for only about four seconds, so this feature must be used with a good amount of forethought and judgement. In certain game options you can also speed up the movement of the belt that your baker is standing in front of by pulling the joystick to the right.

There are, of course, a few perils to hinder your progress. Sets of knives and



forks occasionally show up on the conveyor belts. If your baker touches this cutlery, his crumpled body drops to the bakery floor where the janitor, a true professional, sweeps him up like any other bit of refuse. If the knives and forks are an obvious hazard, the gingerbread men pose a much more devious threat. These guys, who emerge from the ovens wearing what appear to be diapers, dance back and forth on the conveyor, daring your baker to box them. You can't stop them by freezing the conveyor belt, it only slows them down. Nor can you hang around their belt waiting for them to come within reach, because there are still the cakes to contend with on the other levels. But if you move away from them, these vindictive pastry people are liable to leap suicidally off the edge of their conveyors.

Boxing all the cakes in a wave earns you a well-deserved "coffee break," in which all action freezes until you move your baker to pick up a steaming cup of coffee that's placed on the center conveyor. You are initially allowed to drop four cakes, and are awarded an extra chance for each wave completed, up to a maximum of four chances. There are sixteen game variations in all and flipping the left difficulty switch to "A" will start each game off at its fourth wave.

If there is such a thing as a "happy" video game, then Cakewalk must be it. From the jaunty theme tune to the bright, well-detailed graphics, the game is practically all smiles. Fortunately, there's a good action game tucked underneath all that sweetness and light. The difficulty levels are varied and well-modulated, and it takes skill and timing, as well as the judicial use of both the conveyor speed-up and freeze features, to complete a board.

—D.P.

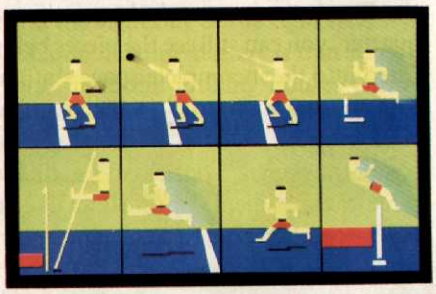
THE ACTIVISION DECATHLON

(Activision/2600)

The 1984 Summer Olympics is almost a year away, but the folks at Activision aren't waiting. David Crane has designed **The Activision Decathlon** and now every Atari 2600 owner has the opportunity to go for the gold.

Unbelievably, Crane has somehow managed to squeeze all ten events of the modern decathlon into this cart. Up to four players can compete in 100-,400-and 1500-meter races; 110-meter hurdles; the shot put, javelin and discus throws; high jumps; long jumps; and pole vaults.

At the lower left of the screen is your athlete, and swinging the joystick from left to right, over and over, causes him to run, his speed dependent upon how quick you are with the stick. As the athlete runs, the bleachers of the stadium,



as well as the objects that he's running towards, scroll from left to right. The action button activates whatever feature is required for a particular event, such as jumping during the hurdles or throwing during the javelin and shot put.

To help you judge how you're doing during an event, a calibrated "performance gauge," which serves pretty much the same function as a speedometer, is provided at the bottom of the screen. During the racing events, a timer is on display, and signposts showing the distance your runner has covered scroll across the bottom of the track. You are allowed three attemtps at all non-racing events, and for all events you are awarded points according to how well you do. There are no skill level options, but athletes in training can practice specific events by using the Select switch.

David Crane has brought an amazing degree of variety to what is essentially just a running game. The races, which at first glance might seem to differ in length only, actually attempt to parallel as closely as possible the strategies used in the real-life situations. Thus, while the 100-and-400 meter dashes require you to run as fast as possible from start to finish, the 1500-meter race encourages you to pace yourself during the first 1300 meters, demanding little movement on the joystick to achieve optimum speed. When you come up to the last 200 meters, the word "SPRINT!" appears on the bottom of the screen, and the meter suddenly drops, effectively simulating the exhaustion that sets in at the close of a long race. From that point on, you must pump the joystick like crazy to keep your runner moving.

The non-racing events combine the manual-dexterity demands of the racing events with the need for split-second timing. Hit the action button too soon and your pole-vaulter won't clear the bar, or your discus thrower won't be able to take advantage of the full distance of his throw. Press too late, and in most cases, your athlete's attempt is "scratched."

What with Activision's reputation for fine graphics and sound, there's almost no need to point out how good The Activision Decathlon is technically. From the opening strains of the beautifully rendered Olympic theme, to the smooth scrolling of the stadium, to the fine animation of the athlete as he runs, this game is a beauty.

The only reservations I have are about the constant back and forth movement of the joystick that's required to get the athlete to run. I have no doubt that a joystick sees more action during this game than it ever would with even the most frenetic shoot'-em-up. This probably won't matter if you're playing with a joystick on the order of the Wico Command Control or the Super Stick. However, the standard Atari joystick, or the Discwasher Pointmaster, which have essentially the same mechanism, won't be able to stand up to the demands of this type of action over the long run.

—D.P.

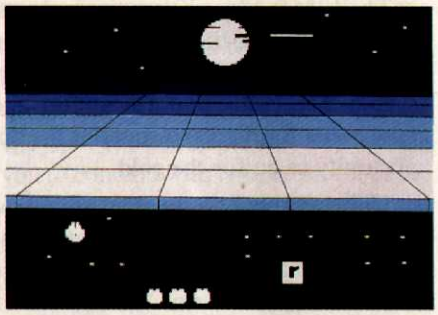
THE RETURN OF THE JEDI: DEATHSTAR BATTLE

(Parker Brothers/2600)

Since *Star Wars'* creator, George Lucas has sworn that neither *The Return of the Jedi* nor its predecessor, *The Empire Strikes Back,* will ever be released on videotape (not legally, at least), what better way to relive the struggles of Luke Skywalker and company than with a video game? Fear not, because Parker Brothers has scheduled for release not one, but two Return of the Jedi games for the Atari 2600. The first out of the gate is **Deathstar Battle.**

This one-player game is based on one-third of the climax of Return of the Jedi (the last portion of the film actually consists of three separate, simultaneous battles). Using your joystick to maneuver the Millenium up, down, left, and right, you must fly with Lando Calrissian (former owner and current guest-pilot of the Falcon) on a mission to destroy the half-finished Deathstar before it becomes fully operational. In the first board, the screen is divided in half by a glowing forcefield that stretches off into infinity. On the bottom half of the screen, you must use the Falcon's missiles to destroy the zig-zagging TIE fighters and Imperial Shuttles that patrol the exterior of the field and occasionally fire shots at you. At the top of half of the screen, far in the distance, is the incomplete Deathstar. Don't let its ragged appearance fool you, that's just a ruse of The Emperor's to lull the rebels into a false sense of security. Shortly after the game begins, this floating fortress becomes fully operational, its death ray tracking your ship and reaching out from the depths of space in an attempt to destroy you.

If you can dodge the deathray and zap three of the enemy, gaps start to open and close in the surface of the forcefield. Fly the Falcon underneath the forcefield where a gap appears, taking care not to collide with the forcefield's own forcefield that winks on and off at regular intervals, and you are warped into the second screen, directly underneath the Deathstar. The setup is pretty much the same as in the first screen: you maneuver the bottom half, there are TIE fighters to blast and a tracking deathray to dodge. Your major goal, though, is to chip away at the bottom layers of the Deathstar and hit the small, glowing reactor core. This will start a chain reaction that will destroy the space station and your ship if you can't dodge the fireballs that are spewed by the satellite in its death throes. Survive the dazzling explosion and you start over again on the first screen. Once you have mastered the basic game, you can flip the difficulty switches to make collisions with the TIE fighters fatal, or to expand the horizontal range of the deathray. You can also use the select switch to summon up a faster version of the game.



Technically, Deathstar Battle is as sophisticated a game as you can find for the 2600. The graphics are magnificent, with the system's wide range of colors put to good use in bringing a sense of depth to both the forcefield of the first screen and the Deathstar of the second, two of the best dimensional effects I've seen on the 2600. The attention to detail is impressive. In the first screen, where the Deathstar is scarcely larger than a quarter, you can still see the pieces being fitted into the incomplete space station. The unusual soundtrack, which emphasizes musical tones in its portrayal of onscreen events, sounds more like a piece of experimental music than like an outer-space dogfight. The game play, while vaguely reminiscent of Yar's Revenge, poses its own unique challenges, particularly if you opt for the faster version with the TIE fighters that can destroy on contact. In fact, the action can be so involving that you might not even notice that the entire game has been limited to the bottom half of the screen. If there is anything to object to, it's that, as the Deathstar winds up to its big explosion, the fireballs are so fast and so profuse that not even The Force could help you to dodge them all. Practically every victory becomes a loss, which after a while is a little annoying.

Prospective Jedi knights who are hoping to recapture the adventures of the rebels with this cartridge may be surprised to find that Deathstar Battle doesn't quite have the slam-bang feel of the Star Wars series. This is not the 3-D "trench battle" that everybody was probably expecting. For that, you'll have to go to your arcade and invest a quarter in Atari's Star Wars coin-op. It's a pity that Parker Brothers couldn't have come up with a more dimensional game to accompany the wonderfully detailed secondary graphics, but don't write Deathstar Battle off too quickly. Depth or not, it's still a well-crafted and fun shoot 'em-up.

—D.P.

THE ADVENTURES OF TRON

(Mattel Electronics/2600)

It's no secret that Walt Disney's TRON was less than successful at the boxoffice. And there's also some question as to whether Bally's arcade adaptation of the film was the quarter sucker that some people claim it was. With this bleak outlook, Mattel Electronics has nevertheless gone ahead and introduced four different home games based on the story of warfare within a computer's innards, including TRON Deadly Disks and TRON Solar Sailor. **The Adventures of TRON** is the most recent to be released, and the only one designed exclusively for the Atari 2600.

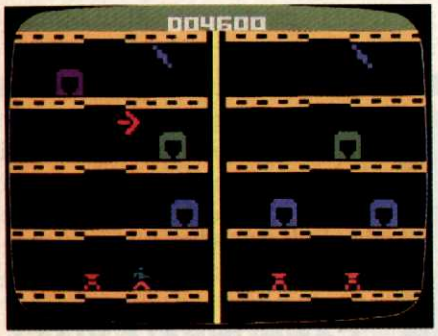
In spite of what the title might suggest, this is not what would generally be considered an adventure game. It is, instead, a climbing game in which the player uses the joystick to help TRON grab all the "Bits" that float across a screen that has been divided into four levels. TRON moves left and right when the joystick is moved in those directions, jumps when the action button is pressed, and leaps to the next lowest level when the joystick is pulled back.

To ascend to the next highest level, TRON must first cross over a vertical line that divides the screen in half to activate elevators at either side. By positioning TRON on an elevator and moving the joystick up, TRON will be carried to the next level. To reach another level, the cycle of crossing the dividing line and positioning on the elevator must be repeated. The player has to play attention when crossing the line since, on any level but the bottom-most one, if TRON doesn't jump over the line, it will act as a sliding pole that will carry him

down to the bottom of the screen.

The enemy, for the most part, takes the form of trios of horseshoe-shaped Recognizers, which wind their way down from the top of the screen, exiting off the end of one level and reappearing on the next (for some reason, when they enter the bottom level, they turn into triangular grid bugs). TRON can jump over these enemies, but since that means performing three perfectly executed leaps in a row, it isn't recommended.

Simple avoidance is the best strategy. In fact, avoidance is the only course of action to take with the tanks that show up at later stages of the game. The tanks, in addition to following the same course as the Recognizers, also start firing as soon as they are on the same level as TRON.



Most levels have two Bits that float back and forth which TRON must jump up to catch. The exception is the third level which contains one Bit and an arrow shaped Solar Sailor. TRON can jump up on this and catch it for a free ride across the screen. Its ostensible purpose is to carry TRON over the heads of his adversaries (assuming that these mechanical monsters have heads), but I've never had any reason to use it. When TRON has grabbed all the Bits on the screen, stepping into the dividing line will slingshot him into the next difficulty level. This is a one-player only game, and there are no player selectible options available.

With the exception of the characters, The Adventures of TRON has very little to do with the movie. Don't get me wrong, it's not a bad game by any means. The action is smooth and joystick control is logical and responsive. But there's nothing here that we haven't already seen before and once you have become accustomed to the techniques of operating the elevators and jumping the dividing line, the game is a breeze, even at its higher difficulty levels. —*D.P.*

BLUEPRINT

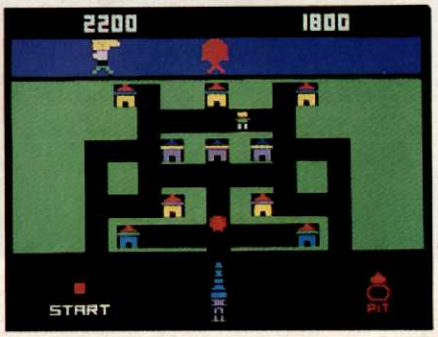
(CBS Electronics/2600)

Bally/Midway came out with its arcade game, **Blueprint**, last year. As a concept it had merit: In order to save his girlfriend from the clutches of Ollie Ogre, your onscreen persona had to rummage his neighborhood for parts that would fit the blueprint of a weird-looking gun. Since very few machines ever found their way into the arcades, thanks to CBS Electronics, Blueprint has been given a second chance as a game for the Atari 2600.

As the game starts, Ollie Ogre, who looks vaguely like a Sno-Cone with legs, sneaks up on the gun and hides several pieces of it in the houses of the maze-like neighborhood that fills most of the screen. He then begins to chase your girlfriend, Daisy Damsel, across the top of the screen. It's up to Our Hero (that's his name, according to the instructions) to rebuild the gun before Ollie can catch up to Daisy.

Using the joystick to maneuver Our Hero through the maze, you must duck into the houses that you hope will contain gun parts, and then fit the parts into a blueprint located at the bottom of the screen. The problem is: The gun can only be built from the bottom up. Since you can only carry one part at a time, and since time is such a precious commodity, the trick is not only to find a part, but to find the right one at the right time.

Complicating matters is that some of those innocent-looking houses conceal



some nasty surprises. If you enter any house that does not contain a gun part, you'll emerge holding a bomb. The color of the bomb indicates how long, or short, the fuse is. And the only way to save yourself from annihilation is to drag the bomb over to a disposal pit at the lower right of the screen and drop it in.

On top of everything else, you must also avoid something called the Fuzzy Wuzzy, an ex-suitor of Daisy's who's not only looking for love in all the wrong places, but also has it in for Our Hero. Luckily, you can press the action button to give Our Hero a burst of speed, which comes in handy if he is carrying a bomb or if time is running out for the completion of the gun. You can run out of speed boosts, however, and they can only be recharged by placing a piece on the blueprint.

If you can manage to rebuild the gun and push the start button at the lower left of the screen, the neighborhood disappears, giving you a clear shot at Ollie. You must first set the speed of the missile by using the joystick to adjust a meter on the upper right of the screen (the slower the missile travels, the higher the point value if it strikes Ollie).

You then aim the gun by sliding it left and right, and fire it by pressing the fire button. If timed correctly, the missile will travel up the screen and hit Ollie (even at its fastest speed it's slow). If it misses, then the gun is reset at its slowest speed and you must try again.

You lose a life when Ollie catches up to Daisy, or if Our Hero comes into contact with the Fuzzy Wuzzy or falls victim to a bomb. You start with three lives and can gain a life by destroying Ollie three times. You can also increase the amount of time that Ollie chases Daisy before catching her by completing one whole round without losing a life.

Blueprint is different, to say the least. With the major goal being to locate the parts that you have seen quickly hidden at the beginning of each round. Players must have a sharp memory and a fast eye.

Yet, if the neighborhood half of each round at least poses the challenge of a good memory game, the second half, where the player must try to knock off Ollie, is at best an anticlimax. The problem, I think, lies in the fact that Ollie and Daisy are restricted to enacting their chase in a portion of the screen above the neighborhood. Our Hero never comes into contact with these two characters and, until the gun is built, there's no real reason to even look at them unless you want to try and figure out how much time you have before Ollie catches Daisy.

In all, Blueprint, which could have been quite a charming and amusing game, just doesn't live up to its potential. It's a nice memory game that, in the end, falls flat. —*D.P.*

COMPUTER CORNER

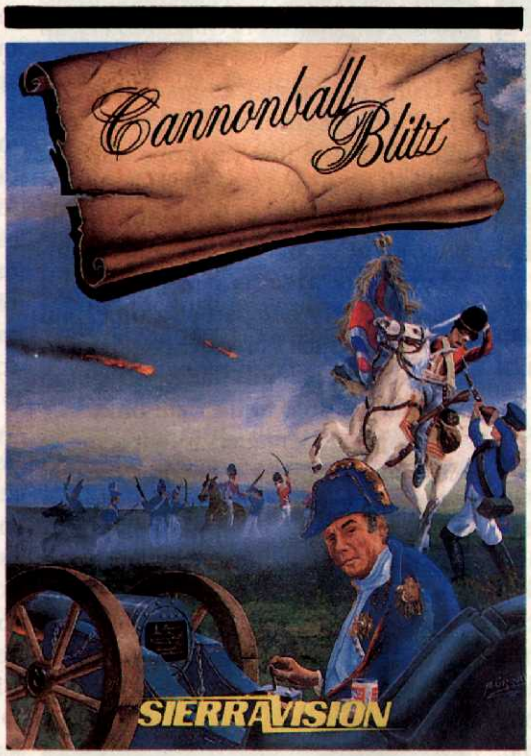
A Giant Leap Ahead for Computer Games

By Dan Persons and Mark Brownstein

Did you feel the earth move? It was just a mild tremor caused by the entrance of two heavyweights, Parker Brothers and Activision, into the computer game field.

Any remaining doubts about the popularity of home computers should be dispelled by the fact that these two biggies have decided to start releasing games for various computer systems. The powers-that-be at Activision, in particular, are well known for their conservative outlook, not introducing games for a particular system until they're absolutely sure that enough people own the system to make it worthwhile. The approach that each company is taking to the market is decidedly different. Parker Brothers is diving in head-first with simultaneous releases of brand new arcade adaptations and with games that are being licensed from small, innovative software houses. The folks at Activision are playing it a bit cooler, however, testing the water with the release of some of their old standards before they decide to take the plunge with more original titles.

The question is: What effect is the entry of these two giants going to have on the smaller software houses? Shelf space in any store is limited. Will retailers take a chance on stocking games that require time to build popularity through word-of-mouth, or will they opt for the output of companies with mammoth distribution chains and advertising budgets to match?



The answer will lie as much with you, the gamer, as with anybody else. If you clamor only for games put out by the industry's heavy guns, then those companies will eventually achieve dominance in the field. But if you shop around, seeking the new and unusual from less famous sources (and, of course, consulting these pages to find out which games are worth looking into), then chances are good that both small and big game manufacturers can exist in a more-or-less harmonious relationship. The future, and variety, of the field may well depend on your desire to experiment.

—Dan Persons

CANNONBALL BLITZ

(Sierra On-Line/VIC-20 ROM Cart)

If you have yet to learn not to judge a game by the artwork on the front of the box, then Sierra On-Line's **Cannonball Blitz** could serve as a pretty good lesson. From looking at the box's illustration of rebel soldiers clashing with British Redcoats, you might surmise that this is some sort of combat game, perhaps a slide-and-shoot where crafty American rebels knock off line after line of marching Redcoats. But plug this ROM cart game into your VIC-20 and what do you get? Donkey Kong?

Not exactly, but so close in game play to Nintendo's famous climbing game that only the most naive would deny that this is a deliberate knock-off. In the first screen of Cannonball Blitz you must maneuver your soldier to the top of a hill that looks suspiciously like DK's zig-zagging construction site.

However, instead of a big ape hurling barrels at you, a Redcoat stands at the top of the screen rolling bombs down the sloping floors. Your soldier can

leap over these bombs when you press the action button on your joystick. What distinguishes this board from the same one in Donkey Kong is that, instead of ladders connecting one floor to another, there are teeter-totters located at strategic locations on each floor.

To ascend, you must position your soldier at one end of a teeter-totter. If you're lucky, a bomb will drop through a trapdoor in the floor above, and land at the opposite end of the teeter-totter, catapulting your man to the next floor. If you're not lucky, the bomb will roll over the trapdoor, and drop down the edge of the floor, forcing you to jump it as it rolls back towards you.

Make it to the top of the building, hitch a ride on a balloon up to a small platform on which is planted a red, white and blue flag, and you are advanced to the next screen. This is the rivet screen, where you try to collapse the building by scrambling up and down ladders and removing the rivets located on the various floors by running over them. Meanwhile, you must dodge the fire of cannons that chase you across the floors and up and down the ladders.

When all the rivets have been pulled, the floors drop out from under the Redcoat located at the very top. It's then on to the dumbwaiter screen, where you again must make your way up to a flag via a set of step-like platforms and a pair of ascending and descending dumbwaiters, while dodging blasts from more roaming cannons and avoiding bouncing bombs that take the place of Donkey Kong's springing action.

There's no reason why those who have a VIC-20 should be denied a Donkey Kong of their own. And the three boards of Cannonball Blitz do make a fair attempt at imitating the original. But if the form is there, the fun isn't. This game has none of Donkey Kong's charm, which is what made the game so popular to begin with. Animation is coarse and lifeless and, since the graphics conform to Sierra On-Line's predilection for white-on-black color schemes, theirs isn't even a pretty picture to look at. Game play is adequate, but nowhere near the complexity of the original. The Donkey Kong fan who wants *something* for his/her VIC-20 may well derive some sort of comfort from Cannonball Blitz. For the rest of us, it's on to bigger and better things.

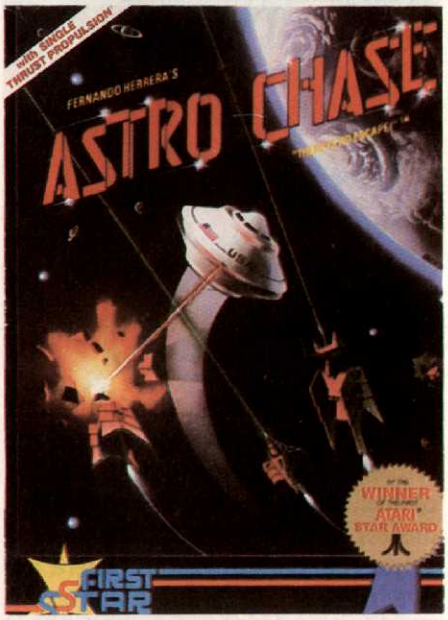
—*D.P.*

ASTRO CHASE

(Parker Brothers/Atari ROM Cart)

Astro Chase, one of Parker Brothers' first forays into computer games, is the first release from them that is not based on a licensed arcade game or a famous character. It is also the first time that Parker Brothers is assuming the role of distributor, taking a game designed by an outside vendor (in this case First Star Software), translating it from its original disk version to a more widely accepted ROM cart format, and releasing it under the Parker Brothers trademark to give it extra clout in the marketplace. All this would be for naught if the game itself weren't any good, but the folks at Parker Brothers are too smart to let that happen.

In this one player space game for Atari computers, your joystick controls



a saucer on patrol in orbit around Earth. With the ship always remaining at screen center, and the galaxy scrolling horizontally and vertically around it, it's your job to seek out and destroy the small pulsing mega-mines that have been sent to destroy our home planet.

Shooting them is easy: Press the action button and move the joystick in the direction you want to fire. What causes problems is in getting to those mines. Something has gone seriously awry with our galaxy. The enemy has surrounded it with a forcefield, making the entire field of play about three screens high by three screens wide. They have also randomly scattered numerous planets and "hot stars" throughout the area.

Bumping into planets, the forcefield or a hot star reverses your saucer's course and costs you precious energy units. Fortunately, there are four energy generators at each corner of the galaxy. By repeatedly passing your saucer over these generators, you can gradually regain lost energy.

Now if only it was just you and the mines, everything would be swell. But, of course, this wouldn't be much of a game if there weren't a few guys trying to take you down. Sure enough, not only do you have to worry about destroying mines, but you also have to contend with a series of spaceships whose sole objective is to either eliminate you or distract you from your primary mission.

These ships, which carry such names as Ramatrons, Firetrons, and Ramalon Jets, vary in number and in their abilities from board to board. Some attempt to ram you, some can shoot at you, and others can move at high speed. They can be destroyed with your lasers, or they can be rammed after passing your saucer through one of eight shield depots stationed around Earth. This maneuver only lasts for a few seconds and costs you one hundred energy units, so it should be used, at most, sparingly.

Destroy sixteen mines and you are given two bonus saucers, are awarded bonus points according to the amount of energy remaining, and are advanced to the next level of difficulty. There are twenty-four player selectable skill levels, each of which starts you off with three saucers.

Astro Chase was designed by Fernando Herrera, the first winner of the Atari Star Award (hence the name of the company he founded: First Star Software). Released in disk format last year, it attracted quite a bit of attention for its elaborate graphics. Indeed, the visuals of Parker Brothers' ROM cart adaptation, which is virtually identical to the original version, are impressive.

In fact they are so good that the game itself pales slightly in comparison. With such wonderful sights and sounds, one would hope for more than the two dimensional shoot'em-up provided here. The interaction of your ship and the background is more on the order of a pinball game than like the physics one would expect in outer space.

The much touted and, as the instructions point out, "proprietary" Single Thrust Propulsion™ system turns out to

be merely a control feature where your ship travels in one direction until you change course, thus permitting you to fire in all directions without altering your direction of travel. A nice feature, but certainly not worth going to the effort of getting the term trademarked.

But if Astro Chase is not the revolutionary game that some would have you believe, it is still a good, original variation on the space war theme. The control of your saucer is smooth and responsive, while the ability to fire in all directions as you're moving is an interesting wrinkle. The best strategy for this game is to charge up your ship's batteries at the beginning of each round and then keep in a tight orbit around Earth, to prevent the situation where a mine sneaks up and blasts your planet to bits while you're off zapping enemies in some remote corner of the galaxy.

In the end, Parker Brothers is to be commended for permitting a wider audience access to this truly entertaining game. Astro Chase may not be the harbinger of the next generation of video games, but the graphics and game play make it well worth the price of admission.

—D.P.

THRESHOLD

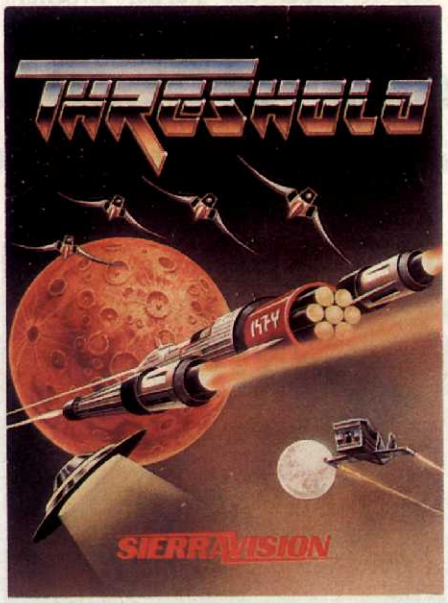
(Sierra On-Line/VIC-20 ROM Cart)

Someday, an enterprising mail-order firm is going to come up with a Slide-and-Shoot Game of the Month Club. Don't be too surprised, because that seems to be the frequency with which game manufacturers come up with yet *another* variation on this venerable genre. Not even Sierra On-Line, a manufacturer of very original games, can resist pitching in with just one more slide-and-shoot. This time it's a ROM cart adaptation of their popular game **Threshold** for the VIC-20.

Taking its cue from Activision's Megamania, Threshold requires you to clear screen after screen of nasty diving bow ties, scrub brushes, windshield wipers and other such debris, without letting your bottom-mounted spaceship be destroyed by either the missiles that the enemy drops or by a collision with one of the meanies.

You can only fire one laser shot at a time, but if you fire your gun too often it overheats, leaving you helpless until a vertical indicator on the right drops down to about the middle of the screen. Each of your five ships is also permitted one use of the Hyper Warp Driver. This device, activated by tapping the VIC's space bar, slows down all action onscreen for a few seconds. This comes in handy during those boards where the enemy fills the full height of the screen, giving you very little time or room to dodge them.

After every fourth screen, your ship automatically docks with a mammoth



Mother Ship for refueling (and prints out a nice "THANKS MA!" after the refueling is done). If your ship runs out of fuel, shown by another vertical indicator, or if you lose all five of your ships, the game is ended. There are twenty-four different enemies in Threshold and you're permitted to pick which ones you want to start with.

There's a nice feeling of "can't wait to see what's coming up next" in his game that's not unlike Imagic's Demon Attack. The variety of aliens is staggering, everything from whirling boomerangs to chomping mouths, to boxes that rotate through all three dimensions. Good animation enhances the effect and at times increases the difficulty of each level by having the alien alternately present either a wide or narrow face as a target for your lasers.

The attack plan of the enemy varies little from screen to screen. Some just move horizontally, at other times whole groups dive en masse. For the most part, though, what increases with each new screen is the number of bombs that are dropped. Unfortunately, what really trips Threshold up is Sierra On-Line's reliance on purely black-and-white graphics. With the enemy's missiles being represented as small dots, it is exceedingly difficult to distinguish them from the scrolling star field that serves as this game's background. Many times you find yourself either dodging harmless stars or falling victim to a missile that couldn't quite be picked out amongst all the scrolling scenery.

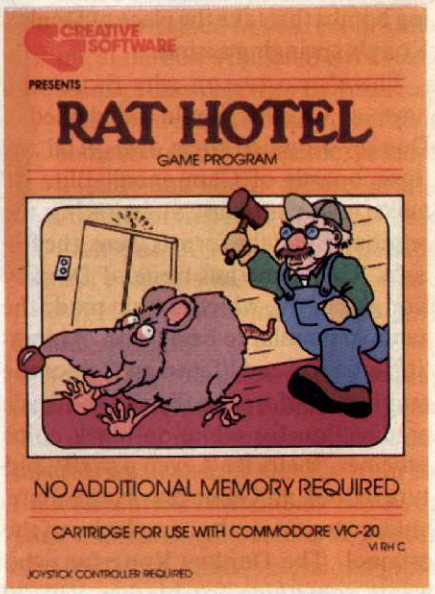
Aside from that deficiency, which one eventually does adjust to, Threshold turns out to be quite a decent shoot'em-up. Its strength lies in the sheer variety of the enemies that you must face and the skill with which they have been animated. Its weakness is that it's not a very difficult game. Chances are good that a seasoned Galaxianite could handle all twenty-four waves with little trouble. However, for the beginner who wants a slide and shoot that's as entertaining to look at as it is to play, Theshold isn't a bad choice.

—D.P.

RAT HOTEL

(Creative Software/
ROM CART VIC-20)

There's big trouble at the Hotel Paradisio. Not only is it saddled with a tacky name, but it also houses a rat who's running from floor to floor, gobbling all the cheese scattered on each



level and avoiding Waldo, the maintenance man. Under normal circumstances, you might want to do something about it, like call an exterminator, but in

Creative Software's **Rat Hotel**, *you* are the rat. So what might have been a game of destruction turns into one of survival.

Well, that changes things drastically. In this ROM cart game for the VIC-20 you must use your joystick to guide your rat through each floor of the hotel. In order to advance to the next floor, you must eat all the pieces of cheese while dodging the ever-vigilant Waldo and the deadly traps that he has placed dangerously close to the cheeses. There's no way of overcoming Waldo, but there are plenty of nooks and crannies that a clever rat can use to hide from him.

Don't spend too much time hiding though, since you only have three minutes to clear out the entire building. When you have "de-cheesed" an entire floor, positioning your rat at the extreme right or left of the screen and moving the joystick in that direction calls the elevator that will carry you down to the next floor. At lower levels of the building, the cheese begins to act very peculiarly, changing colors at regular intervals. Blue cheeses will give you a temporary burst of speed, while a black cheese means instant death.

If you finish the entire building and get a nibble at the "Big Cheese" located in the center of the basement, you start out on a new building at a faster difficulty level. There are five player selectable skill levels in all. You start out each game with three lives and gain a bonus life for every 10,000 points earned.

The designer of Rat Hotel, who bills him/herself as JoLee, has kept this a light and amusing game. The soundtrack is highlighted with tunes taken from Bach (these days you not only have to know programming to design games, you also have to have an extensive knowledge of music in the public domain).

As for the graphics, well, therein lies a problem. For some reason the graphics for Rat Hotel turned out scrambled on my VIC. This didn't effect the obstacle course, but anytime my rat or Waldo moved, they would turn into piles of multicolored confetti. The problem may lie with the game, but it's just as likely that Commodore has made some changes in the VIC that makes more recently designed cartridges scramble on older machines (I bought mine a year ago).

Whatever the reason, the game was still playable in this condition, and I like it irregardless. If you don't mind taking the part of a rodent, you might find Rat Hotel is a good, charming game. I would advise, however, that you check with your dealer to make sure that he will give exchanges or refunds for game carts, just in case you run into the same situation that I did.

—D.P.

CHOPLIFTER

(Creative Software/Cartridge)

Choplifter was a tremendously successful game for the Atari 800 computer. The story was a natural: You had to fly your helicopters into an area where hostages were being held, and return them safely back to the U.S. Embassy. On your way, you had to avoid offensive tanks, and enemy planes and space ships.

Unlike most other games, there were no points awarded for shooting down the enemy: The only way to score points was by rescuing hostages. The graphics of the Atari version were very good—down to a flag waving at the Embassy.

The VIC-20 is really a pretty game. The opening graphic is good, game play elements are good (strategy is involved in figuring out how to get the most hostages out safely), but there are some weaknesses. The game ends too soon. Once you have saved/lost a total of 64 hostages, it's over. Although it would be nice to have some reward (another level of play?) for completing your missions, you go back to square one whether you've killed off all the hostages, or heroically rescued every last red-blooded one of them.

Further, the graphics contain a rather disconcerting feature: As you fly from the Embassy, the borders and other objects scroll in front of you, giving a nice 3-D effect (the closer objects scroll faster, just like in real life). Unfortunately, the stars in the background (millions of miles in the background) also scroll across the background.

Choplifter is a good game, overall. If the idea of scrolling stars, and a limited challenge are good enough for you, Choplifter is recommended as a fine addition to your collection.

—M.B.

ZAP

(Micro-Ware Distributing/Cartridge)

Micro-Ware undoubtedly wins the award for the heaviest VIC-20 cartridge. What you get is a heavy blue cartridge, which seems to be filled with some kind of plastic, making it impossible to open or remove the circuitry sealed into it. No matter, this had absolutely nothing to do with the games.

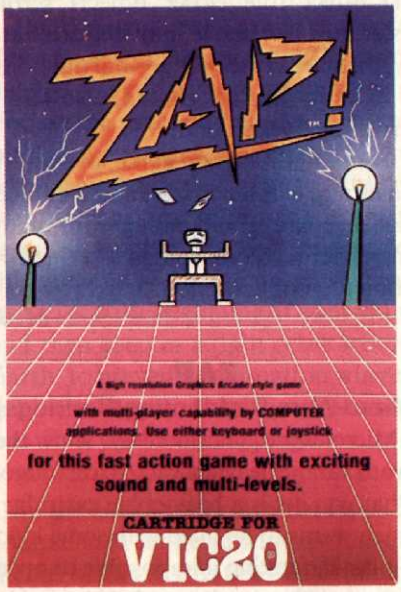
Zap is an extremely pleasant surprise. On the back of the box, was some kind of ridiculous story about working a man up a corporate structure. What you get is a unique, fun, challenging strategy/reflex game.

Imagine a path 8 levels high, which requires you to run from left to right, lifts you a level, then makes you go right to left, lifts you a level, and so on. Running side to side, of course, is normally pretty easy stuff. Now imagine six holes cut into that path. These holes are filled with what look and sound like red ping pong balls. The balls bounce back and forth from top to bottom to top. What you have to do is run across the horizontal levels while avoiding the ping pong balls. To make things difficult, the balls bounce at different speeds, so you can't just wait till they all drop and run like hell, you have to time your moves very carefully. If you touch a ping pong ball, you lose a life (until you get the hang of it, the three lives go very quickly).

Making things even more challenging, at the bottom of the screen is a timer. The quicker you make it through the structure, the higher your bonus points will be. For extra points, there is a + sign which sometimes pops up behind you. If you go back and touch it, you get extra points (if it's worth the risk). Resting

between ping pong ball paths isn't always safe, either. If you are on the wrong side of the path, the balls will take you out.

Although game manufacturers and designers are often in disagreement



about what makes a good game, there is common agreement that for a game to be good, it must be easy to learn and hard to master. Zap meets those criteria...and it is a good game.

—M.B.

JUMPMAN JUNIOR

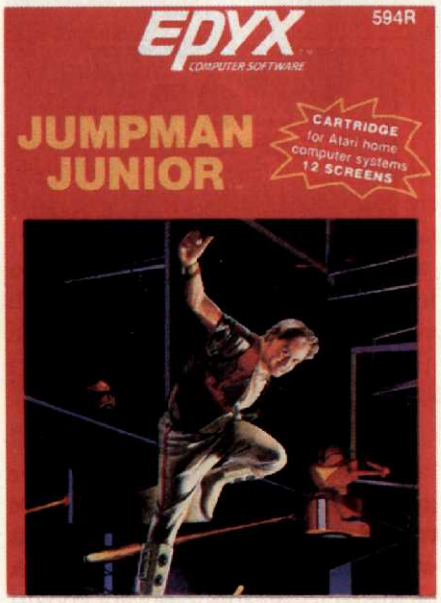
(Epyx/Atari ROM CART)

Thank you, Epyx. I had heard a lot about Jumpman and had wanted to give it a try myself. Unfortunately, Jumpman is a disk game, and who has the money for a disk drive these days? Designer Randy Glover must have been aware of this problem. He cut Jumpman's mammoth thirty screens back to twelve, pared the rules down a bit, jammed the whole thing into a ROM cart for Atari computers, and gave this version the appropriate name of **Jumpman Junior.**

In this one-to-four player game you, as Jumpman Junior, must help out big daddy Jumpman. While Pop is busy trying to rid Jupiter Command Station of a crew of nasties known as the Alienators, Junior has to defuse a set of bombs planted across the elaborate framework of the Command Substation. The joystick controls his movements across the walkways and up and down the ladders and one-way ropes. The action button activates Junior's rocket shoes to leap over obstacles and skirt gaps in the framework. Defusing the bombs is easy: Just run over them. It's getting to the bombs that causes headaches.

The Alienators, although always offscreen, have their eyes on Junior, and are constantly firing at him. Some bullets are easy enough to dodge, while others will float serenely across the edge of the screen and then suddenly make a right angle turn to track you down. Meanwhile, depending upon which screen you are on, Junior must contend with disappearing platforms that must be leaped, dumbwaiters which require split second timing to catch, electrified walkways that won't kill you, but can slow you down long enough for an Alienator to draw a bead on you, and on and on.

Bonus points are awarded depending on how fast you can defuse an entire section, but there's no time limit to race against. There are eight player selectable speeds. Paradoxically speed number 1 is the fastest and hardest, while 8 is the slowest. The average player will no doubt feel most comfortable with a speed setting of 5 or 6.



It's understandable that Randy Glover had to cut corners in order to get all of this into a 16K ROM Cart. The most obvious result of this economizing is that the Alienators have been relegated to purely offscreen roles. Make no mistake about it, though, Jumpman Junior is still a mammoth game.

The twelve individual screens, which carry such intriguing names as "HERE-THEREEVERYWHERE" and "FIGURITS REVENGE", all pose their own unique, and sometimes maddening, challenges. My favorite screens at this point are the dumbwaiter screen, which took me about forty-five minutes to master, and a screen dubbed "HELLSTONES", where bullets lazily dribble down from platform to platform and have the crazy ability to hound Junior's steps.

Joystick control is precise and responsive, a must considering the demands for accurate timing on some of the boards. While Jumpman Junior himself is not much more than a stick figure, this might have been necessitated by the elaborate nature of the frameworks and a soundtrack that features at least seven different tunes. Mr. Glover is also to be commended for letting each player pick his or her own skill level, a setup which is a lot more democratic than forcing four players of varying aptitudes to endure a speed that only one player is suited to.

Already this year we have seen two games that expand upon the basic concept of maneuvering around a framework: Miner 2049er and Jumpman Junior. Don't ask me to choose between the two of them, they're both exceptional. Rest assured, though, that if you choose Jumpman Junior, you will be picking an excellent game.

—D.P.

TYPE ATTACK

(Sirius Software/
ROM CART VIC-20)

It would be nice if typing exercises were a little more colorful and more action-packed. In short: A little more *fun*. Game designers Jim Hauser and Ernie Brock must have had the same idea. Their solution is **Type Attack,** a ROM cart program from Sirius for the VIC-20 that not only provides good practice for touch typers, but is also an entertaining game in its own right.

Type Attack wraps its educational intent in an attractively familiar package. The first part of each round (or "lesson") as the instructions refer to them) is called Character Attack. In a variation on the classic Space Invaders scenario, columns of letters march back and forth, slowly advancing on the bottom of the screen. But instead of zipping a lone laser cannon left and right to shoot each letter down, you're supplied with a laser battery that stretches across the entire bottom of the screen. With the computer taking care of aiming, all you

have to do to eliminate a letter is to press the correct key on the VIC's keyboard.

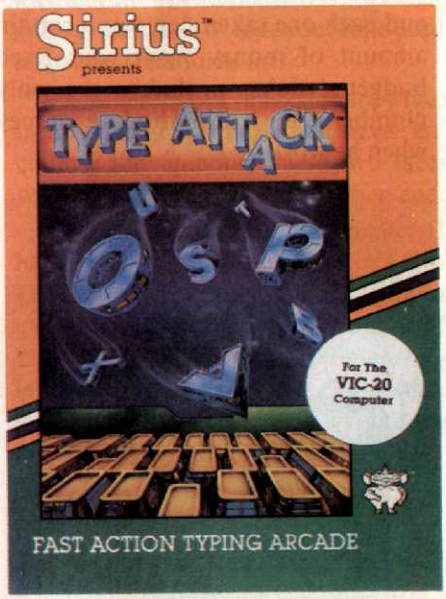
Letters, however, are only vulnerable when you have a clear shot at them from the bottom, which means that if you want to get a letter in the middle of a vertical column, you first have to eliminate all the letters underneath it. If you type a letter that doesn't appear onscreen, or isn't vulnerable to attack, you're docked one energy unit from the initial allotment of 100 you're given at the start of each lesson. If you allow the letters to come in contact with your lasers, you lose a whopping 35 energy units. After you have eliminated three waves of letters, with each wave starting off closer to your guns, the lesson moves on to the second segment, which is called Word Attack.

Here, as groups of words scroll from right to left across the screen, you must locate the word that's highlighted by a horizontal bar and type it out on the keyboard. If you type it correctly, a press on the RETURN key will activate your lasers to zap the word and the horizontal bar will then highlight another word. Any errors can be eliminated with a tap on the same RETURN key. If you allow a word to exit off the left side of the screen, it will reappear at the right, giving you another chance at it, but you'll also be docked one energy unit for each letter in the word.

If you're able to clear out all three waves of Character Attack without getting zapped and can eliminate all the words in Word Attack without allowing them to scroll around, you're treated to a Bonus Words round, a slightly faster repeat of the Word Attack round just finished. During Bonus Words, however, you're not penalized for any missed words.

After you've completed Word Attack, the game starts over on the next lesson. There are fifteen lessons altogether, beginning with practice on the "home" keys (ASDF and JKL;) and branching out from there to the rest of the keyboard. Players can choose to try all lessons in sequence, which will take about 45 minutes, or to practice one particular lesson. There's also a "Lesson Maker" option that lets the player customize a lesson with his own characters and words. No less than 99 different speed levels are provided, with levels 1 to 19 suited to beginners.

The practical aspects of this game have been enlivened with such nice touches as a scrolling star background, several different musical themes, and a chorus line of high-kicking letter A's at the completion of a bonus round. Designers Hauser and Brock have thoughtfully included a vertical energy meter at the right side of the screen in addition to the digital counter up top, making it easy to keep track of your energy



levels with peripheral vision. There's even a word-per-minute meter on the left side of the screen, so you can get some sort of feedback on the development of your skills, though the instructions caution that the results may not reflect the scores achieved on a more traditional typing test.

Both the Character and Word Attack waves seem to provide solid practice in the techniques of touch typing, although it should be noted that some crafty gamers, once they've discovered that each Character Attack segment covers only a specific area of the keyboard, may also discover that randomly hitting the keys in that area will clear out most of the attacking letters (remember, though, that if you cheat in this game, you're the one who eventually loses).

—D.P.

CROSSFIRE

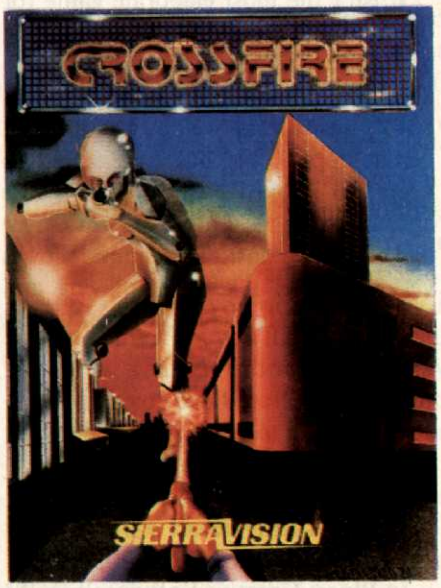
(Sierra On-Line/
ROM CART VIC-20)

At a time when most designers are bending over backwards to program into their games such frills as background music, character animation, and perhaps a nifty visual effect or two, a game like Sierra On-Line's **Crossfire** doesn't look too impressive. There's no animation to speak of, the "city" is just a plain grid of squares, and the sound effects have been limited to explosions and an occasional bleep. First impressions can be misleading, though.

The instructions try to weave some sort of tale about aliens and spaceships, but in this ROM cart contest for the VIC-20, the game actually boils down to a sort of urban conflict scenario. You're being stalked through the streets of a city by a group of armed nasties. Using the joystick, you maneuver through the five by six grid of streets, firing your gun by simultaneously pressing the action button and moving the joystick in the direction you want to shoot.

At first, the bad guys are content to hang around the perimeter of the city and take pot-shots at you. Eventually, though, they'll enter the city proper and start to track you down. If you shoot one of your pursuers, it reappears at the city's edge, reincarnated at the next stage of development.

The heavies start out as sort of abstract diamonds, then become spiders, Space Invader-type aliens, and finally skulls. Shooting a skull



wipes out that adversary for good. Eliminate all the aggressors in a wave and the game starts over with a fresh supply of hostle enemies. Your gun is capable of rapid fire, but be careful, because you only have a limited amount of shots. The first screen starts

you off with thirty-five shots and each succeeding screen reduces that allotment by five. When you're down to ten shots, you must run over a flashing symbol in order to reload. For every twelve shots fired, a bonus symbol will appear. If you can run over it, you're given an award that ranges from 100 to 800 points.

If you're the type who suspects that people are conspiring against you, or tend to feel that the walls of your room are closing in on you, then you'd best stay away from Crossfire. When the going gets good, and the enemy starts converging on you from all four directions, the feel is deliciously paranoid. The lack of elaborate sound effects heightens this sensation, making your attackers silent, implacable, and heartlessly vicious.

The action is so relentless that I have yet to crack the first level, and I don't hold out much hope of ever seeing the bonus life that's awarded at every 5,000 points. Complicating matters is the joystick control: Tilt the stick and you move in the direction selected until you reach the next intersection. If you have started your player moving in one direction, and find yourself walking into a bullet, there's no way of instantly reversing course in an attempt to outrun death. You may as well kiss your on-screen surrogate good-bye.

It isn't the most elaborate game for the VIC, but Crossfire is an intriguing and addictive effort. The person who adapted this game (he's billed as "Gordon") seems to be well aware of its inherent appeal. He has endeavored to keep you hooked by having the game automatically reset after the last player has bitten the dust. This simple ploy is very effective: I kept on playing and playing which is one habit I don't mind acquiring.

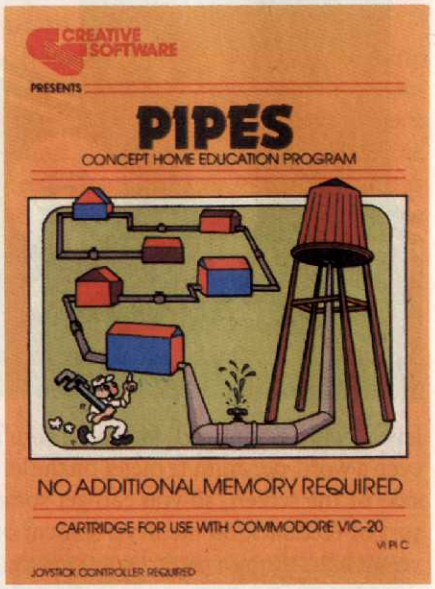
—D.P.

PIPES

(Creative Software/
ROM CART VIC-20)

In **Pipes,** Creative Software's ROM cart game for the VIC-20, your mission, as neighborhood plumber, is to connect as many as five houses to a central water tank. You use your joystick to wander around the playfield where the tank and houses are randomly scattered. The entire field is larger than the screen and scrolls vertically and horizontally as your on-screen plumber moves.

At the upper left of the screen is a reduced view of the entire playfield allowing you to get a good idea of the locations of the houses in relationship to the tank. You have access to a whole variety of pipes and faucets located in a factory at the right edge of the field. The problem is that there's only a limited amount of each style of pipe and each one taken depletes a certain amount of money from your fixed budget (you're probably the only plumber in the world who *loses* money when he works).



Using the action button to pick up and place pipes end-to-end, you must try to connect the houses to the tank with the fewest number of pipes and without any leaks. When all the houses are connected, positioning your plumber next to a valve and pressing "V" on the VIC's keyboard opens the valve. When water is flowing to all the houses, a press on the action button displays a scoreboard that awards you points on your efficiency in completing the job.

Creative Software has dubbed this an "educational" game, claiming that it has something to do with "spatial relationships and economics." It's possible that children will pick up something about conserving cash by choosing the right pipe to do the job, but I wouldn't worry too much about it. Aside from its more altruistic goals, the game is nicely designed and quite enjoyable.

The graphics, as is the case in many VIC-20 games, are functional but a little clunky, and the sound effects are sparse. However, there's a very satisfying "shplurk!" whenever you connect a pipe. Played by the rules, the game makes nice busy work, but it is at its most fun when you ignore your primary goal, efficiency, and let your creative urges dictate the configuration of the pipes. The goal should be to create the most elaborate network of pipes as possible, while still connecting all of the houses without any leaks. You won't get big points, but sometimes style matters over money.

Fortunately, Pipes is open ended enough to allow you such freedom. When games seem to be getting faster and more complex every month, Pipes is a good, low-pressure creation that even provides for some leeway in its rules.

—D.P.

JAWBREAKER II

(Sierra On-Line/
ROM CART VIC-20)

About two years ago, Sierra On-Line came up with a game called Jawbreaker. In it, a set of chomping teeth maneuvered through a maze swallowing dots while being pursued by four "happy faces." The teeth's only defense against the happy faces was to eat one of four energizer dots in the corners of the maze. This allowed the teeth to chase after its pursuers and swallow them for bonus points.

The game attracted quite a bit of attention, especially that of the lawyers from Atari, who slapped Sierra On-Line with a suit claiming that the creators of Jawbreaker had infringed upon Atari's exclusive home video license to Namco's Pac-Man. The suit was eventually settled out of court, although the exact details of the settlement were not made known to the public. However, one can make a pretty good guess about what some of Atari's demands were by taking a look at **Jawbreaker II,** Sierra On-Line's ROM cart game for the VIC-20.

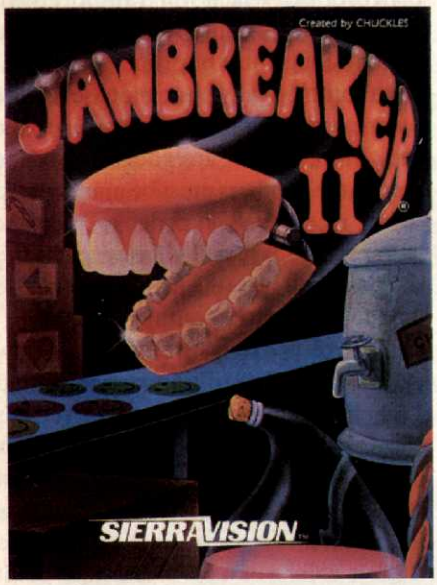
The big change is not in the rules. The teeth chomp the dots and the happy faces chase the teeth. Chowing down on one of the energizers located in the four corners of the screen allows you to turn the tables on the faces for a few seconds

and gulp them down, if you catch them. There's even a bonus "Special Treat" at screen center that will award you with an extra 100 to 400 points when swallowed. The big change in Jawbreaker II is the maze. There isn't any.

Instead the screen is separated into five horizontal aisles. Set into the partitions, separating one aisle from the other, are doors that continually slide back and forth. Your teeth can only change aisles by catching these doors. Clearing out all the aisles starts you off on a new screen with smarter happy faces. You begin each game with three sets of choppers and win a bonus set for every 10,000 points earned.

Designer Doug Whittaker has done a nice job of giving Jawbreaker II its own personality. The movement of the happy faces gives one the impression that they're not just flat discs but actual globular beings that are rolling down the aisles. They start out rather dumb, but as the game progresses they will chase after you as soon as you enter an aisle, or will try to avoid you after you've become energized.

Two tunes, The French Can-Can and In the Hall of the Mountain King, are used throughout to indicate both normal game play and action when your teeth



are energized. And, of course, there's the sequence where, after clearing out a screen, your choppers are scrubbed by a toothbrush before starting out on another board. You have a choice of using either a joystick or the VIC's keyboard to direct your teeth. As with most other games that have this set-up, the joystick is preferable.

The problem with Jawbreaker II is that there doesn't seem to be much variety. With the maze reduced to mere aisles, the action is restricted, for the most part, to horizontal movements. The sliding doors help provide some variety, but they can't really keep the essential back and forth motion of this game from becoming tedious. Without the convolutions of a maze and with only 86 dots per board, the screen is too easily cleared, leaving you with nothing to do but either gulp an energizer or bide your time until a Special Treat turns up.

Since there can be only one happy face in an aisle at a time, you'll never encounter the situation where two faces will try to rush you from either end.

As gobble games go, Jawbreaker II has its share of charm. And Sierra On-Line is to be credited for retooling a game to retain a reasonable amount of play action while avoiding the ever vigilant gaze of the Atari Force. Jawbreaker II is a fair game, but it's not quite the answer to a Pac-Maniac's prayers.

—D.P.

BLUE MAX

(Synapse/Atari Disk)

Blue Max is an interesting game, which you have to approach with an open mind. When I first saw Blue Max, I thought it was probably another River Raid—your biplane flies over terrain which looks somewhat similar—bridges, a river with barges, factories on the land. And then I began to play the game.

I overheard somebody saying that this is what Zaxxon should have been. Is it? As with Zaxxon, your mission is to maneuver your craft (in this case, your biplane) through a diagonally scrolling battlefield, using a simulated 3-D effect to control altitude. Land vehicles and low buildings can occasionally be shot down if you fly at low altitudes.

But unlike Zaxxon, you get some other nice touches. The game offers the extra challenge of enemy biplanes, which you must either avoid or shoot down. To shoot them down, you must watch your intelligent instruments at the bottom of the screen, and line up so that your altitude matches that of your opponent—then sneak behind (or in front) of him, and blast away.

Blue Max has three screens. In order to get from one to the next, you must bomb strategic targets, which have a blinking symbol to identify them. Once all the targets are destroyed, you move on the the next screen.

The intelligent display tells your altitude (if you drop too low, you get an audible warning, and the altitude line changes color), you keep track of fuel and bombs, and can tell when you are on the same altitude as the enemy planes. You also get advance warning

when an enemy plane approaches, and aid in determining which way to change your altitude to line up with the enemy.

Taking off and landing are learned maneuvers. Upon take-off, you must wait until your plane has reached 100 mph, then you can ascend by either a) pushing the joystick forward, or b) pulling it back, depending on your option. When you run low on fuel or bombs, you may get a friendly airstrip for refueling. Unless you land at the beginning of the strip, you won't make it. If you miss the strip, you'll run out of fuel. There is a timer following the play (although you can't see it running), and a bonus score is added at the end of your mission, if you successfully complete it. You don't really know how well you are doing until it's over. And when it ends, you get a rating (from Kamikaze Trainee all the way up).

Unlike most other games you only get one life, which may go very fast if you aren't careful. Why not more chances? According to the game's designer "that's life. You don't get second chances."

—M.B.

Some Holiday Season Handiworks

By Patricia Canole and Melinda Glass

Just in time for the gift-giving season are these small wonders which are portable versions of some of today's hottest arcade games. More and more, companies are taking a second look at the marketability of table-top/hand-held video games and are producing some well-known adaptations as well as some unique originals.

Mattel, for example, is producing hand-held versions of their best-selling Masters of the Universe game. And Parker Brothers, who already flooded the market with their video game system's Q*bert, has also released a table-top version.

With all that's been reported in recent months about video game companies, probably this is one off-shoot which should "standalone" and possibly overcome the "zaps" of the industry.

Direct from the arcades comes Parker Brothers' adaptation of the Gottlieb hit in a table-top version. **Q*bert** has been faithfully translated to this format with our little hero tirelessly hopping about on a three-dimensionalized pyramid of cubes in order to change their color.

A four-directional joystick allows you to control Q*bert's movements as you try to complete a pyramid. Standing in the way of this endeavor is Red Ball who rolls down from the top of the pyramid in the hope of landing on Q*bert who must be maneuvered out of the way to avoid a collision. More than one Red Ball appears on the pyramid at any given time, so you have to stay alert.

There's also Coily, the green snake, who's "hatched" from a Red Ball. It seems the only way to shun this nasty is to lure Coily off the pyramid by hopping onto a flying disc strategically situated at different spots next to the pyramid. Land on it and Q*bert is wisked out of harm's way.You'll also score 500 points.

The action, strategy and effects which made Q*bert such a success in the arcades is most definitely present here. The challenge being to get through level after level of play, changing the colors of the pyramid once, twice or even three times.

Q*bert features nine skill levels with four rounds per level. And once you reach the second level, there's a new

obstacle in your way, namely Slick. He'll move downward until he eventually falls off the pyramid or can be caught by Q*bert. The latter will result in 100 points. The problem with Slick, however, is that he can undo what you've already done, by changing the cube colors back to their original color.

All in all Parker Brothers has captured the essential qualities of Q*bert in an exciting, portable version that should keep you bouncing around trying to find the best strategy as the action gets that much more difficult the further you progress. —*P.C.*

Dual-Screen Mario Bros.

Nintendo has done much to stretch the boundaries of what can be accomplished with hand-held video games. Not only have they incorporated their successful arcade games in this down-sized format, but they've also bought us dual screen creations which have opened up the playing area to more complex challenges.

The multi-screened **Mario Bros.** features a time display as well as an alarm, but the real attraction is the difficult game play that is different from the arcade machine of the same name. This time, Mario is working along with his brother, Luigi, loading cases on a conveyor belt in a bottling plant.

Mario's job is to receive empty cases (which appear on the bottom of the right-hand screen) and place them on a conveyor belt which will transport them to his brother, Luigi (on the left-hand screen). Luigi must be properly positioned to automatically place the cases on the second conveyor belt and so on up to the top. More bottles are added along the way as the brothers must be maneuvered to the right levels in order to keep the cases going. When the cases reach the last conveyor belt (the fifth level) they're then loaded onto a waiting truck.

Control buttons are placed below each screen for positioning Mario and Luigi at whatever conveyor level has cases. When the truck has a total of six cases, the engine is started (exhaust smoke appears) and, after eight cases are loaded, it drives away. Each case loaded onto a conveyor belt scores one point and each truck loaded with eight will score ten points.

The challenge in the game play comes when several cases are speeding along the belts, at which time you must quickly move Mario and/or Luigi up or down so as not to miss a case. Should this happen, the foreman of the plant is angered and a little action interlude takes place

before play continues. After three misses the game is over.

However, if you're lucky enough to reach 300 points a fanfare is sounded and all the misses are canceled. And if you haven't suffered any misses up to that point the game will go into a special "chance time," where all points awarded are doubled until a "miss" is made.

Mario Bros. is a superb hand-held game; a teaser that really does test your reflex abilities. —*P.C.*

Mini Hand-Helds

Along with their many other titles such as Thief in the Garden, Goalkeeper, Spider and Space Strike-Back (*Video Games* August '83), PM Industries is now featuring **Space Rescue**. And like all of PM Industries' mini handhelds, it offers a convenient clock display and alarm function. Space Rescue is housed in a palm-sized orchid casing and your mission is to capture all astronauts as they descend, by maneuvering your space shuttle to the right position.

At first, it seems easy enough in Game A to rescue the astronauts as they slowly fall, but as the game progresses so does the pace at which they descend. This is where careful timing—and quick movement on your part—comes in handy. It is possible to capture the falling spacemen, thanks in part to the control buttons located on either side of the screen. These controls move the space shuttle left or right to quickly pick up a falling astronaut. Each spaceman caught by the shuttle scores one point. However, when an astronaut is missed, he immediately falls directly to the planet's surface where an alien emerges and "zaps" the unsuspecting spaceman. Three misses and the game is over.

In Game B, the game play is quicker not to mention more difficult. Although the game play is similar, the added attraction of UFOs and bombs enter the picture to destroy your space shuttle. Scoring remains the same, but the game is over when either three astronauts are "zapped" or your space shuttle is destroyed by a UFO/bomb.

If you're lucky enough to reach 200 or 400 points all misses are cancelled.

If your flight of fancy is still more space games, then perhaps POP Games' **Space Shuttle** is what you're looking for after all. This game has two levels of difficulty (Game 1 or 2) and also includes a clock display and alarm function.

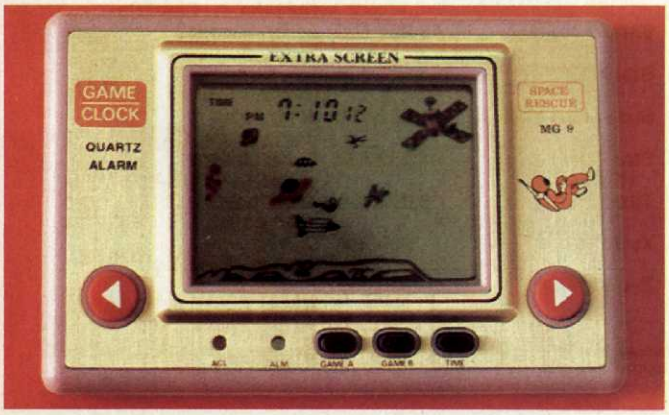
Photos by Perry Greenberg

The object of the game is to house all of the space shuttles sent by the mother ship (located in the upper right of the screen) while at the same time protecting your shuttle carrier and the space town from alien missiles.

To start the game, set the desired level of play: Game 2 remember is quicker and more difficult. At this point, when the mother ship sends the first shuttle ship down, press either the right or left movement control buttons in an attempt to retrieve it. This causes the shuttle to change into a shuttle carrier and returns to the mother ship. The game is now activated. If a shuttle is not housed, it is counted as an error. And should your shuttle carrier be destroyed by an enemy missile that also is considered an error. Once the game is in progress, points are awarded by housing the descending shuttles. One point is scored for a successful capture and ten points are racked up each time an attacking enemy missile is shot down. The missiles, will at times, attack the space town (located at the bottom of the screen). When this happens the shuttle carrier must be moved far to the right, which will cause it to automatically fire and destroy the enemy missiles. Should the enemy missile not be shot down, it will destroy the space town. This destruction also counts as a "miss" for which you are allowed only four, then the game is over.

The maximum points you can earn is 1,000 at which point you must then restart the game. Also, if you're lucky enough to even reach 200 or 500 points then all previous errors are cancelled.

Both of these mini hand-helds are quite enjoyable and best of all they're the right size so that you can take them nearly anywhere. —*M.G.*



STATS

Top Ten Home Games

Present Position 10/17/83	Last Position 10/1/83	Weeks on Chart	Game
1	1	9	Q*bert (Parker Brothers)
2	2	15	BurgerTime (Intellivision)
3	3	19	Enduro (Activision)
4	4	9	Pole Position (Atari)
5	9	7	Decathlon (Atari)
6	6	13	Jungle Hunt (Atari)
7	7	13	Robot Tank (Activision)
8	8	33	Ms. Pac-Man (Atari)
9	5	29	Centipede (Atari)
10	13	39	River Raid (Activision)

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Top Arcade Games

	Percentage
1. Dragon's Lair (Cinematronics)	100.0
2. Star Wars (Atari)	80.4
3. Pole Position (Atari)	76.5
4. Champion Baseball (Sega)	67.3
5. Q*bert (Mylstar)	59.3
6. Gyruss (Centuri)	57.8
7. Star Trek (Sega)	56.4
8. Time Pilot (Centuri)	56.3
9. Mario Brothers (Nintendo)	55.4
10. Frontline (Taito)	55.1
11. Turbo (Sega)	53.4
Provisionally rated:	
1. Crystal Castles (Atari)	63.4
2. Elevator Action (Taito)	61.9
3. Krull (Mylstar)	56.7

Provisionally rated between 10 and 25% response rate.

These are the top earning arcade games according to a poll of operators. Those with asterisks indicate operator responses were between 25-50 percent.

HIGH SCORERS

(effective 10/19/83)

Baby Pac-Man	6,685,130	Richard Sattilaro Edison, N.J.
Bagman	6,840,850	Jerry McCloskey Pentieton, B.C. Canada
Buck Rogers	731,030	Bruce Borsato Trail, B.C. Canada
BurgerTime	5,882,950	Darren Kenney Lakewood, CA
Centipede	16,389,547	Jim Schneider Spring Valley, CA
Crystal Castles	833,879	Eric Ginner Milpitas, CA
Champion Baseball	1,000,000	Gus Papas Upland, CA
Defender	76,377,300	Bert Jennings Durham, N. Carolina
Dig Dug	4,129,600	Ken Arthur Blackburg, VA.
Donkey Kong Jr.	1,259,300	Calvin Frampton Pleasant Grove, Utah
Dragon's Lair	482,924	Jack Gale Miami, Fla.
Food Fight	16,725,700	Ken Okumura Santa Maria, CA
Frenzy	4,804,540	Mark Smith Shelby, N. Carolina
Frontline	727,500	John Dunlea Wilmington, No. Carolina
Gorf	2,220,000	Jason Smith Midland, Tx.
Gravitar	4,722,200	Raymond Mueller Bolder, Colo.
Gyruss	7,288,250	Robert Baker Tulsa, Okla.
Guzzler	431,108	Mike Klug San Jose, CA
Joust (new chip)	101,192,900	Rob Gerhardt Lloydminster, Alberta, Can.
Jungle Hunt/King	1,510,220	Michael Torcello East Rochester, N.Y.
Journey	12,181,850	Chuck Coss Stubenville, OH
Liberator	3,016,010	Sean Middleton Anchorage, Alaska
Lost Tomb	20,597,520	Bill McCalister Oskaloosa, Iowa
Millipede	4,702,733	Steve Winter Pompano, Fla.
Moon Patrol (7 cars)	1,214,600	Mark Robichek Mountain View, CA
Ms. Pac-Man	681,130	Tom Asaki Ottumwa, Iowa
Motorace USA	1,341,100	Lyle Holman Ottumwa, Iowa
Munch Mobile	2,035,540	Ivan Luengas No. Miami Beach, Fla.
Nibbler	838,322,160	Tom Asaki Bozeman, Montana
Pac-Man Plus	3,213,900	Shannon Ryan Upland, CA
Pengo (4 men)	809,990	Kevin Leisner Racine, Wisc.
Pole Position E.T. 215.71	66,760	Less Lagier San Jose, CA
Popeye	1,439,430	Orlando Diaz Humaco, P.R.
Q*bert	32,204,485	Mike Lee Richmond, B.C. Canada
Quantum	1,029,160	Judd Boone Moscow, Idaho
Robotron	348,691,680	Brian King Durham, N. Carolina
Satan's Hollow	43,086,600	Aaron Samuel Moscow, Idaho
Star Trek	100,000,000	Tim Collum Dayton, Ohio
Super Pac-Man	588,430	John Azzis Santa Maria, CA
Star Wars (6 shields)	48,339,497	Kevin Gentry Lake Charles, LA
Time Pilot	6,000,000	Karl Drugge Miami, Fla.
Xevious	999,990	Don Morian Seattle, Washington
Zoo Keeper	11,915,060	Roury Hill Myrtle Beach, N. Carolina

Our thanks to Walter Day Jr., of Twin Galaxies International Scoreboard (226 East Main St., Ottumwa, Iowa 52501). Readers who think they might have a high score should send a self-addressed, stamped envelope to Walter Day who will forward the necessary information and forms. Cities given are the locations where the high scores were achieved.

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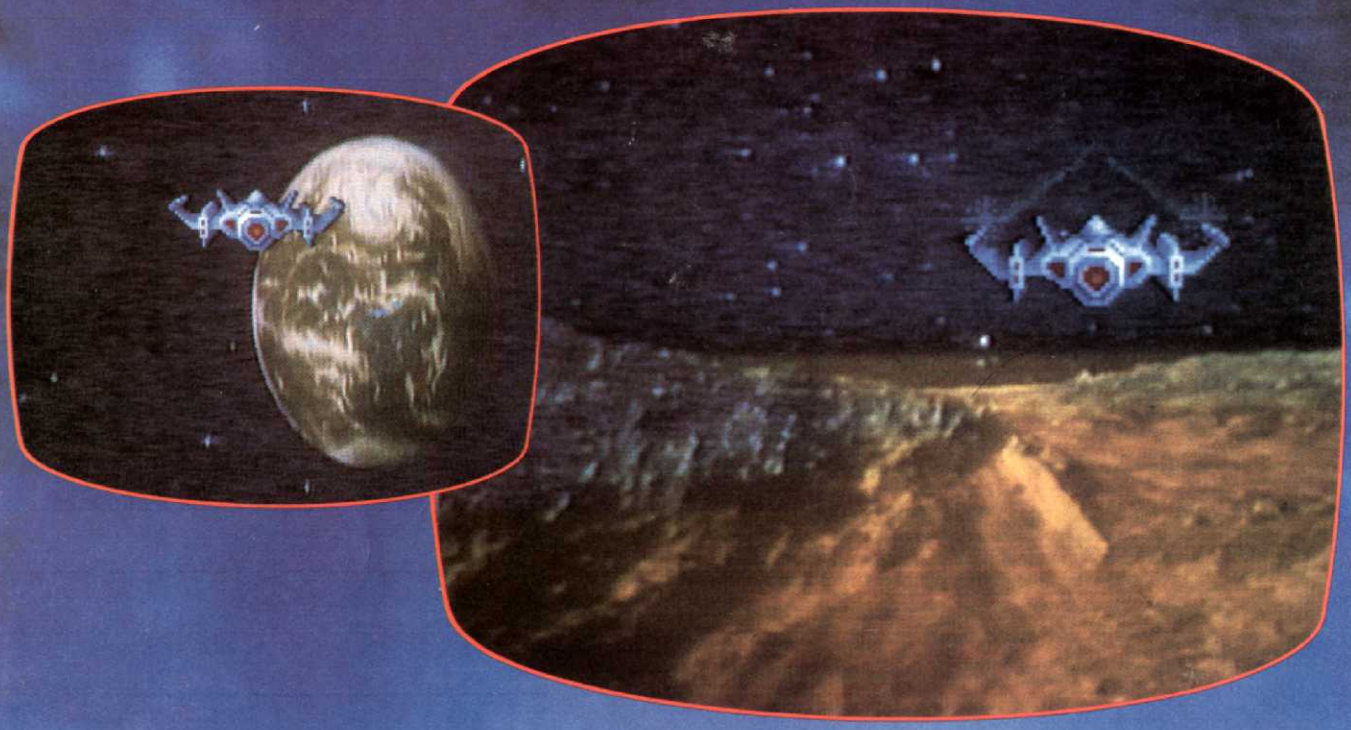
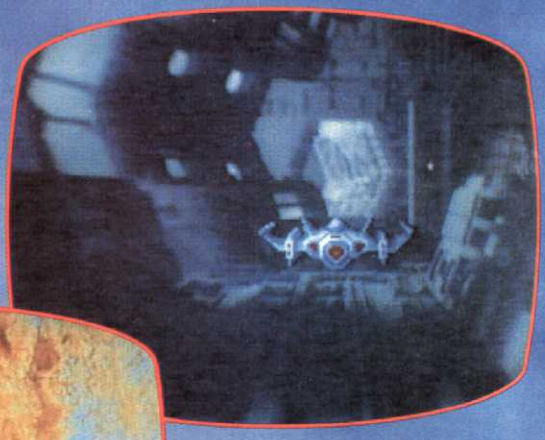
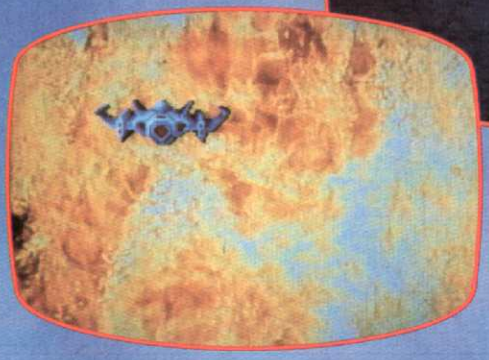
ASTRON BELT
T.M.



BOLDLY INTRODUCED IN '82
BREATHTAKINGLY PERFECTED IN '83
AVAILABLE TODAY





a laser video system from Bally MIDWAY
T.M.

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